Influenza in Manitoba

2000/2001 SEASON

COMMUNICABLE DISEASE CONTROL

Manitoba
Health
Public Health

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- The executive and staff of Manitoba's regional health authorities
- Non-governmental health agencies and the medical community
- Communicable Disease Control (CDC) Unit members – Clare Hargrave, Dr. Digby Horne, Tara Mawhinney, Deborah Nowicki, Pat Matusko, Dr. Greg Hammond, Lynda Graham, Dan Silaghi, Stacy Gandza, Gwen Hawryluk
- Health Communications Unit, Information Resources Division – Barbara Lawton, Debbie MacKenzie
- Cadham Provincial Laboratory – Doug Milley, Brian Klisko and staff from the clinical virology section

The continued success of Manitoba's influenza program could not be accomplished without your commitment and contribution.

Jackie Habing
Influenza Prevention Coordinator
July 2001

Influenza in Manitoba
2000/2001 Season

Background

Influenza is a seasonal viral illness, typically manifested by an abrupt onset of fever, headache, cough, myalgia and sore throat. Unlike other common respiratory illnesses, influenza can cause severe malaise lasting several days. Complications include pneumonia and death. These complications occur primarily in persons 65 years and older as well as individuals with underlying chronic medical conditions. Up to 10-20% of the population can be infected during the time of an influenza outbreak.

Annual influenza immunization is the most effective way to reduce the impact of influenza. Influenza immunization is required each year due to the constant antigenic change of the circulating influenza virus strains as well as the decline in immunity from the previous year's vaccination. For the 2000/2001 influenza season, the trivalent vaccine contained A/Moscow/10/99(H3N2)-like or the equivalent A/Panama/2007/99, A/New Caledonia/20/99(H1N1)-like virus and B/Beijing/184/93-like virus or the equivalent B/Yamanashi/166/98 as recommended by the World Health Organization and the Canadian National Advisory Committee on Immunization.

In Manitoba, influenza vaccine is offered at no charge to selected high-risk groups each year (see target groups listed below). Influenza vaccination has been shown to prevent illness in approximately 70% of healthy children and adults when the vaccine antigens closely match the circulating influenza virus strains. Further, the vaccine is estimated to be 50-60% effective in preventing hospitalization and 80% effective in preventing death when used in elderly persons residing in personal care homes. Across the province, immunization coverage rates exceed 85% in personal care homes but are much lower (15-30%) among health care providers and are approximately 50% among persons over 65 years of age and those under age 65 with chronic medical conditions.

For the 2000/2001 influenza season, the Communicable Disease Control (CDC) Unit recommended that the following high-risk individuals receive influenza vaccine at no cost:

- adults and children with chronic cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis and asthma) severe enough to require regular medical follow-up or hospital care (children who require additional visits to adjust their medication to control asthmatic symptoms are considered at high risk);
- persons of any age who are residents of personal care homes and other chronic care facilities (does not include prisons);
- persons 65 years of age and older;
- adults and children with chronic conditions, such as diabetes mellitus and other metabolic disease, cancer, immunodeficiency, immunosuppression (due to underlying disease and/or therapy), renal disease, anemia, hemoglobinopathy, inflammatory bowel disease, celiac disease, multiple sclerosis, rheumatoid arthritis, lupus, alcoholism, etc.;
- children and adolescents (age six months to 18 years) with conditions treated for long periods with acetylsalicylic acid;
- persons infected with HIV;
- persons with risk factors described above, embarking on travel to destinations where influenza is likely to be circulating;
- persons capable of transmitting influenza to those at high risk, including:
  - health care workers, volunteers and other personnel in settings where care is provided for those at high risk noted above. Examples are:
    - hospital employees,
    - physician office and outpatient clinic employees,
    - personal care home employees,
    - seniors recreation center employees,
    - home care employees,
    - first responders (including firefighters),
    - dentists and dental technicans; and
  - household contacts (including children) of people at high risk who either cannot be

vaccinated or may respond inadequately to vaccination (individuals who are immunocompromised or individuals ≥65 years). This category includes family, relatives or friends who frequently visit persons in chronic care institutions.

Annual Influenza Program Planning

The CDC Unit continued to work with Manitoba's regional health authorities (RHAs) and health care providers in planning influenza prevention activities for the 2000/2001 season. The aim was to increase influenza immunization rates by 20%, from an estimated 185,000 individuals immunized in 1999/2000 to approximately 220,000 individuals. To achieve this aim, the following objectives were established:

- To achieve an overall immunization rate for ambulatory high-risk populations of at least 75% of adults and children with underlying high-risk conditions and individuals 65 years of age or older.
- To increase immunization levels of staff who provide health care to those at risk of influenza (home care staff, personal care home staff and hospital staff). This is to minimize the risk of transmission of flu to those at greatest risk, as well as to protect health care workers themselves and their families.
- To further develop the public health system infrastructure by improving influenza immunization record-keeping and thereby to monitor and further improve Manitoba's influenza immunization program.
- To build health system capacity in preparation for pandemic influenza planning and response capacity.

Enhanced Initiatives for Influenza Immunization

In preparing for the 2000/2001 influenza season, the CDC Unit hosted a planning meeting on May 10, 2000. Representatives from all regional health authorities (including chronic care facilities, public health offices and hospitals), First Nation communities, non-governmental health agencies and the medical community met to review the past season and plan new and creative immunization strategies for the upcoming season. The following recommendations stemming from this planning meeting have been implemented:

- In May 2000, the CDC Unit requested proposals from the regional health authorities (RHAs) to further enhance influenza immunization coverage rates and immunization tracking. The RHAs responded with numerous proposals for initiatives in community, chronic and acute care settings to promote immunization. Table 1 summarizes key components of each RHA's proposal along with the total funding allocated by the CDC Unit.
- New influenza promotional materials (e.g., posters, brochures, fact sheets, bookmarks, stickers, buttons) were developed and distributed to health care providers at the beginning of August 2000 (Appendix A).
- The CDC Unit took steps to improve the monitoring and evaluation of immunization programs with the introduction of adult immunizations to the Manitoba Immunization Monitoring System (MIMS) in August 2000. A MIMS report analyst was hired to facilitate this process.
- Information regarding the 2000/2001 Influenza Immunization Program, including eligibility criteria for the vaccine, was sent out to health care providers, institutions and RHAs in August 2000.
- Available supply of influenza vaccine was increased to 235,000 doses at an approximate cost of $583,000.
- A media launch to promote both the influenza and pneumococcal immunization programs took place on October 12, 2000.
- In addition to the media launch, the CDC Unit sponsored a public information campaign using television, radio, newspaper and bus advertising, commencing October 9, 2000. The Manitoba government's Information Resources Division co-ordinated the communications components of this campaign.
- The CDC Unit continued to provide funding for immunization co-ordinators in each RHA, with the exception of Churchill. The CDC Unit also continued to work with regional immunization co-ordinators to promote, monitor, problem-solve and collaborate on influenza program delivery through regular teleconferencing, phone contact and meetings.

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Table 1. Summary of Targeted Influenza Immunization Initiatives by RHA, 2000/2001

Regional Health Authority	Component	Cost
Brandon	• Increased number of community and facility-based clinics • Enhanced education and promotion of influenza clinics • Secured additional human resources • Provided orientation to staff • Enhanced data entry • Creative marketing	$9,530
Burntwood	• Social marketing • Incentives • Provided education and health promotion to help increase rates and acceptance by health care workers • Accessible clinics with expanded hours • Increased nursing and clerical time • Enhanced marketing • Offered influenza physician educational session	$10,662
Central	• Increased public awareness • Doubled number of community clinics • Developed information displays • Partnered with key stakeholders to promote and provide influenza immunization • Promoted health care worker immunization through timely information, improved access and social marketing • Improved data entry and evaluation	$33,406
Interlake	• Partnered with community to promote and advocate for influenza immunization • Continued advertising campaign and support for provincial strategies • Enhanced awareness of benefits of influenza immunization • Assessed immunization rates of hospital in-patients, PCH residents and home care clients and reviewed current practices to increase rates	$23,699
Marquette	• Partnered with regional health professionals and community to promote influenza immunization • Delivered and evaluated staff survey • Educated key team of health care professionals to provide ongoing education and immunization • Offered additional influenza clinics • Enhanced marketing • Improved data entry	$45,775
Norman	• Increased advertising campaign • Enhanced education to health care workers • Increased visibility and extended clinic hours • Collaborated with community agencies to identify children at risk and their contacts • Enhanced clerical support for data entry	$14,528
North Eastman	• Extended clinic hours and expanded number of locations(?) • Provided community education • Collaborated with health care professionals to improve health care worker immunization rates • Provided incentives • Clerical support at clinic and through data entry process	$18,030
Parkland	• Increased public awareness and education regarding influenza and pneumococcal immunization • Enhanced health care workers' understanding of importance of vaccine program	$27,558

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Regional Health Authority	Component	Cost
South Eastman	• Earlier program planning • Partnered with key stakeholders to promote influenza immunization • Enhanced advertising campaign • Coordination maintained as key to successful integration of all program components • Refined target group strategies • Enhanced outreach activities • Maintained regional flu immunization database • Introduced direct computer entry of data at clinic site • Extended staffing employment period • Encouraged community feedback about the influenza immunization program	$45,086
South Westman	• Staff oriented to delivering influenza and pneumococcal immunization programs • Enhanced coordinated public awareness and education • Partnered with key stakeholders to promote influenza immunization • Worked to increase staffing levels • Improved surveillance, monitoring and speed of data entry • Targeted efforts to improve immunization rates of health care workers • Collaborated with health care professionals to target outpatients, hospital discharges, children and at-risk clients	$31,195
Winnipeg	• Continued to utilize innovative delivery mechanisms to increase the immunization of at-risk people in the community • Continued to identify and offer immunization to high risk home care clients • Improved communication and access to home care workers to improve immunization rates • Continued to increase number of health care workers receiving influenza immunization • Real time data entry and analysis • Increased marketing and promotion • Increased awareness and education • Additional staffing • Improved immunization delivery practices • Improved access • Provided incentives • Early identification, reporting and management to decrease severity and outcome of influenza outbreaks • Accurate data collection of outbreaks • Influenza research in outpatient clinics	$216,780
University of Manitoba	• Comprehensive influenza immunization program to university students in health care professions that have patient contact	$56
Flu Study	• Study looked at immune response to the flu vaccine, particularly among the elderly and immunocompromised. Aim of study is to help develop predictors of who responds to the vaccine and alternate methods of prevention and control of influenza for consideration.	$2,661
TOTAL		$478,966

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Influenza Immunization Surveillance

The 2000/2001 influenza season was the first year in which the Manitoba Immunization Monitoring System (MIMS) was enhanced to include adult immunization records. Prior to this, the MIMS population database did not include Manitoba residents born before 1980. As a result, influenza immunization coverage rates had been based on vaccine doses distributed compared against population estimates.

In the 1999/2000 season, the CDC Unit developed an Access database to allow electronic tracking of influenza doses administered by each region across Manitoba. This process was supported by the RHAs and resulted in renewed calls for enhancing MIMS. As a result, the enhancement of MIMS was completed in time for the 2000/2001 influenza season. Although time lines were extremely short, most stakeholders reported satisfaction with the incorporation of influenza immunization surveillance into MIMS.

The template for data collection for MIMS was an influenza immunization surveillance form, developed by the CDC Unit. Based on the surveillance form used during the previous season, it was designed to capture client-specific information on vaccinated individuals. In addition to data elements such as gender and date of birth, distinct categories were designed to capture information on reason for immunization (e.g., >65 years, health care worker, etc.). The CDC Unit provided a hierarchy for data collection in order to ensure key target groups were monitored. For example, health care workers were a key target for improved coverage. As a result, if a health care worker was immunized, yet also eligible for influenza immunization because of other risk factors, the reason for immunization was to be recorded as "health care worker." Surveillance forms were customized according to provider type: public health, chronic care facility and hospital (see Appendix B).

In total, 136,817 influenza immunizations were recorded in MIMS for the 2000/2001 season. Table 2 reports that over 50,000 immunizations were administered through public health providers (approximately 37%) with 84,015 immunizations provided by physicians (approximately 61%). Table 3 reports that 85,251 doses of influenza vaccine were administered to individuals aged 65 and older (approximately 62% of all doses provided).

Table 2. Number of Individuals Immunized by RHAs – 2000/2001 Campaign by Provider Type

RHA	Facility	Physician	Public Health	Unknown	Total
Brandon	17	4,428	836		5,281
Burntwood	142	274	1,660	1	2,077
Central	25	5,875	4,518	1	10,419
Churchill			111		111
Interake	18	4,724	5,262		10,004
Marquette	211	1,484	3,916		5,611
Norman	266	78	2,220		2,564
North Eastman	7	1,551	2,648	1	4,207
Parkland	7	2,375	3,912		6,294
South Eastman	202	2,091	3,480		5,773
South Westman	706	1,104	3,639	8	5,457
Winnipeg	732	60,031	18,253	3	79,019
Manitoba	2,333	84,015	50,455	14	136,817

Table 3. Number of Individuals Immunized by RHAs – 2000/2001 Campaign by Age Groups

RHA	Total	Age Group 0 - 64	Age group > 65
Brandon	5,281	1,625	3,656
Burntwood	2,077	1,729	348
Central	10,419	3,757	6,662
Churchill	111	85	26
Interlake	10,004	4,091	5,913
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Winnipeg	79,019	28,486	50,533
Manitoba	136,817	51,566	85,251

Limitations

There were limitations with MIMS data collection that should be considered when reviewing data from the 2000/2001 season:

- No formal mechanism was in place for the receipt and return of immunization surveillance forms to the RHAs. Under-reporting is known to have occurred—several hospitals, private nursing agencies and personal care homes commented that they were unaware of the surveillance initiative.
- Denominator data for target groups (e.g., health care workers) are not included in the MIMS database, therefore coverage rates are not supplied.
- Difficulties were encountered with the process for MIMS installation in hospitals, which resulted in delays in data entry.

While recognizing the need for improvements to address data limitations, the introduction of MIMS for influenza immunization surveillance has provided a baseline from which annual comparisons of regional, provincial and national immunization data can be made. Although all doses of influenza vaccine that were administered in Manitoba were not captured in MIMS, the records increased from 18,279 in the 1999/2000 season to over 136,000 in 2000/2001.

Oculo-respiratory Syndrome

During the 2000/2001 influenza season, the Canadian Vaccine Associated Adverse Event Surveillance System detected a small cluster of cases of conjunctivitis in association with receipt of influenza vaccine. Further national discussion revealed the syndrome to be occurring in several provinces. The increased frequency of reports prompted an intense and systematic investigation, including enhanced surveillance of all influenza vaccine-related adverse events; a detailed review of vaccine lots, production and distribution; and a review of both vaccinated and unvaccinated persons for possible risk factors.

Health Canada, in collaboration with the provinces and territories, implemented this enhanced surveillance beginning October 27, 2000. This syndrome comprises bilateral conjunctivitis (with or without itchiness, discharge or edema) or respiratory symptoms (cough, wheeze, chest tightness, difficulty breathing or sore throat) or facial edema (swelling of part of the face e.g., lips, periorbital or the whole face) or a combination of these symptoms. Symptoms occurred from two to 24 hours of vaccination and usually resolved within 48 hours of symptom onset. Ninety-eight percent of these adverse reactions were associated with the Fluviral® vaccine originating from Biochem Pharma Inc. and 2% of cases with Fluzone® and Vaxigrip® products manufactured by Aventis Pasteur Ltd. Cases were reported in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland and the Yukon.

As of December 31, 2000, 100 cases of the oculo-respiratory syndrome were reported in Manitoba. The first was reported on October 27, 2000, in a 39-year-old woman from Winnipeg. The majority of cases (76%) experienced both red eyes and respiratory symptoms (Figure 1).

Figure 1. Number of Cases Reported by Symptoms Category, Manitoba (as of December 31, 2000)

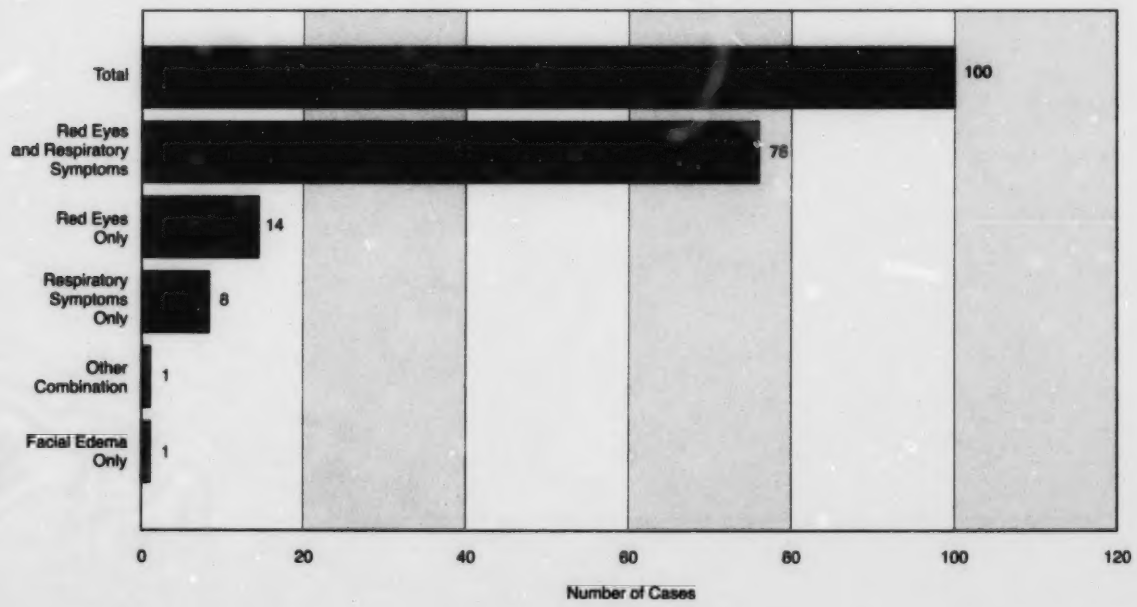
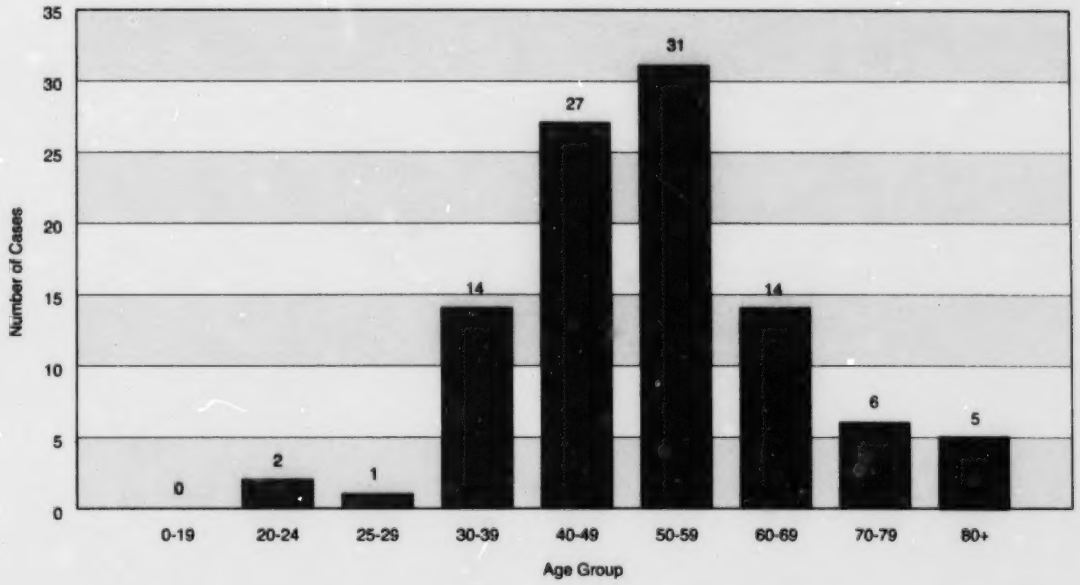


Figure 2. Number of Cases Reported by Age Group, Manitoba, (as of December 31, 2000)



More than half the reported cases (58%) occurred among individuals 40 to 59 years of age (Figure 2) and 72% were female (Figure 3). The majority of cases were reported from the Central, Norman and Winnipeg Regional Health Authorities (67%) with Winnipeg having 33% of the total cases (Figure 4). There were approximately five hospitalizations and three emergency room visits involving vaccinees with oculo-respiratory symptoms; in all instances, full recovery occurred within 24 to 48 hours. No deaths were associated with the influenza vaccine in 2000/2001.

Figure 3. Percentage of Cases Reported by Gender, Manitoba, (as of December 31, 2000)

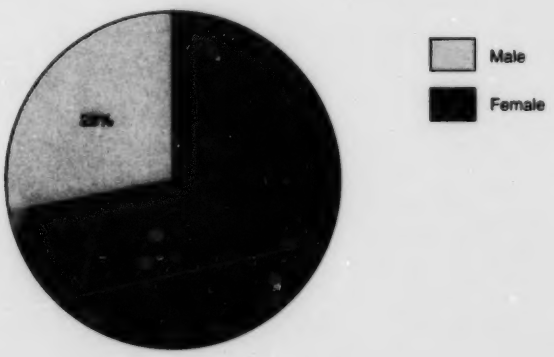
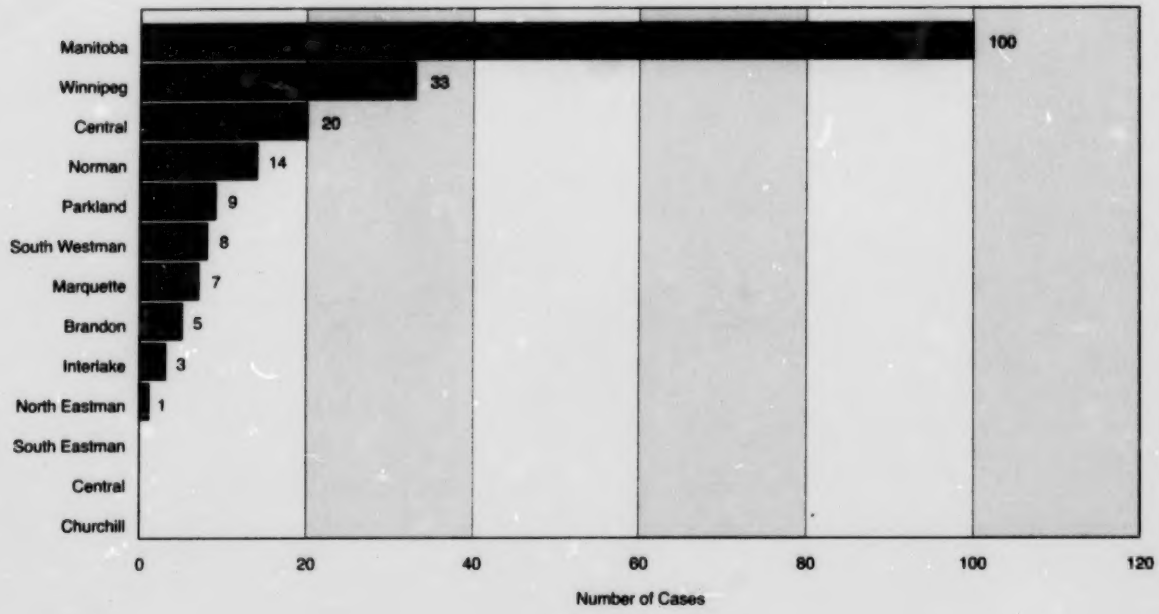


Figure 4. Number of Cases Reported by Symptoms Category, Manitoba (as of December 31, 2000)



Virus Detection and Influenza-like Illness

For 2000/2001, the annual influenza surveillance program included the following components:

- Virus Detection
- Strain Characterization
- Reports of Outbreaks
- Influenza-like Illness
- School-based Surveillance
- Assessment of Influenza Activity Level
- Reports of Deaths
- Routine Dissemination of Information

Virus Detection – Laboratory-confirmed Reports of Influenza

Reports of culture isolations from the Cadham Provincial Laboratory (CPL) were forwarded to the CDC Unit daily. The number of positive cultures was an underestimate of the total number of cases since not all persons with influenza sought medical attention, and of those who did, not all were cultured for the virus. Although culture isolations comprise the largest number of reports from CPL, seroconversions were similarly forwarded to the CDC Unit daily.

Influenza A

As of May 22, 2001, 51 cases of Influenza A were reported (based on specimen date). The first case was reported in mid-December in Winnipeg with a peak of 35 cases in January (Figure 5). Much of the activity occurred between December 31 and January 20 (Figure 6). Close to half of all cases were reported by the Winnipeg Regional Health Authority (47.1%) (Table 4) and roughly 60% of cases were reported among individuals younger than five years of age (Table 5).

Influenza B

In total, 120 cases of Influenza B were reported during 2000/2001 (as of May 22, 2001). The first case was reported in the South Eastman Regional Health Authority in late October. A peak in activity occurred during the months of January and February, reaching a high of 58 and 42 cases respectively (Figure 7). Much of the activity occurred between December 31 and February 24 (Figure 6). The majority of cases were reported among residents of the Winnipeg and Central Regional Health Authorities (43.3% and 20.0% respectively) (Table 4). Roughly one-quarter of cases were reported among individuals younger than five years of age; one-fifth of cases 30-49 years; and approximately 10% of cases among the very elderly (80+ years) (Table 5).

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Table 4. Number of Cases of Influenza A and B by Regional Health Authority and Report Week

Influenza A – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	5
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Winnipeg	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	5	3	6	2	3	0	0	0	1	0	0	0	0	0	0	0	0	24
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	12	11	4	3	3	3	1	2	1	0	1	0	0	0	0	0	51

Influenza B – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	2	3	5	2	4	0	1	1	0	0	0	0	0	0	0	0	24
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4
Norman	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	0	1	0	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	3	0	1	0	0	0	0	0	0	0	0	0	8
South Eastman	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	8
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Winnipeg	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	3	4	7	6	7	4	8	4	4	0	0	0	0	0	0	0	0	52
TOTAL	0	0	0	0	0	1	1	0	0	0	0	2	3	8	3	10	9	14	12	19	12	10	9	6	0	0	1	0	0	0	0	0	120

Table 4. Number of Cases of Influenza A and B by Regional Health Authority and Report Week

Influenza A – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

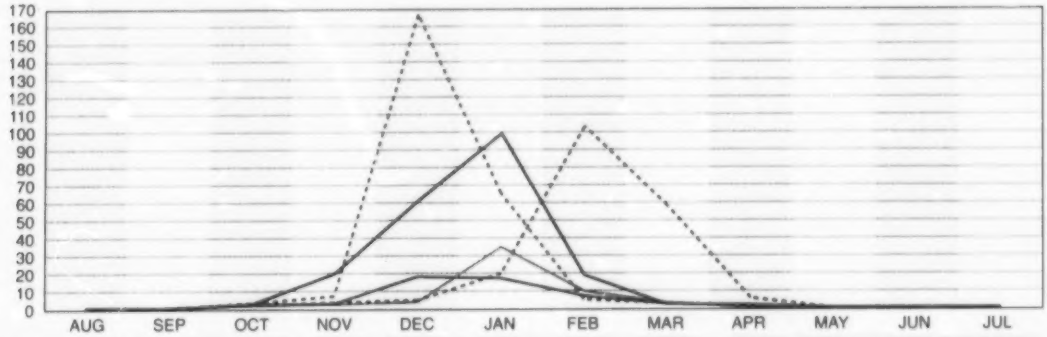
Week of RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	5
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Winnipeg	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	5	3	6	2	3	0	0	0	1	0	0	0	0	0	0	0	24
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	12	11	4	3	3	3	1	2	1	0	1	0	0	0	0	0	51

Influenza B – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	2	3	5	2	4	0	1	1	0	0	0	0	0	0	0	24
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	3
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
Norman	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	0	1	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	3	0	1	0	0	0	0	0	0	0	0	8
South Eastman	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	8
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Winnipeg	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	3	4	7	6	7	4	8	4	4	0	0	0	0	0	0	0	52
TOTAL	0	0	0	0	0	1	1	0	0	0	0	2	3	8	3	10	9	14	12	19	12	10	9	6	0	0	1	0	0	0	0	120

Figure 5. Influenza A: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			2	0	18	17	7	1	0	0	0	0
1997/1998	0	0	1	1	5	20	103	58	6	0	1	1
1998/1999	0	0	0	20	61	99	19	1	2	0	0	0
1999/2000	0	0	3	7	166	65	5	0	1	1	0	0
2000/2001	0	0	0	0	4	35	10	2	0	0		

Table 5. Number (%) of Cases of Influenza A and Influenza B by Age Group, Manitoba, 2000/2001

	Influenza A		Influenza B	
Age Group	**#**	**%**	**#**	**%**
<1	20	39.2	18	15.0
1-4	10	19.6	15	12.5
5-9	2	3.9	8	6.7
10-14	1	2.0	5	4.2
15-19	7	13.7	8	6.7
20-24	3	5.9	7	5.8
25-29	0	0.0	6	5.0
30-39	2	3.9	13	10.8
40-49	5	9.8	11	9.2
50-59	0	0.0	6	5.0
60-69	0	0.0	2	1.7
70-79	0	0.0	8	6.7
80+	1	2.0	13	10.8
Total	**51**	**100.0**	**120**	**100.0**

Strain Characterization

Of the five Influenza A specimens submitted to the National Microbiology Laboratory in Winnipeg, all were A/New Caledonia/20/99-like. For Influenza B, all of the five specimens forwarded for strain characterization were B/Yamanashi/166/98-like.

Outbreaks

In total, 18 influenza outbreaks in acute care and residential facilities were reported during the 2000/2001 season (as of April 5, 2001). Nine of the eighteen were confirmed as Influenza B. One of the eighteen was confirmed as Influenza A.

Oseltamivir was used to control several Influenza B outbreaks with apparent success. However, illness appeared to be mild and in several instances within personal care homes, initial cases did not evolve into outbreaks, making the value of Oseltamivir difficult to determine.

Figure 6. Influenza-like Illness and Number of Laboratory-confirmed Cases of Influenza by Report Week, Manitoba, 2000/2001 Season

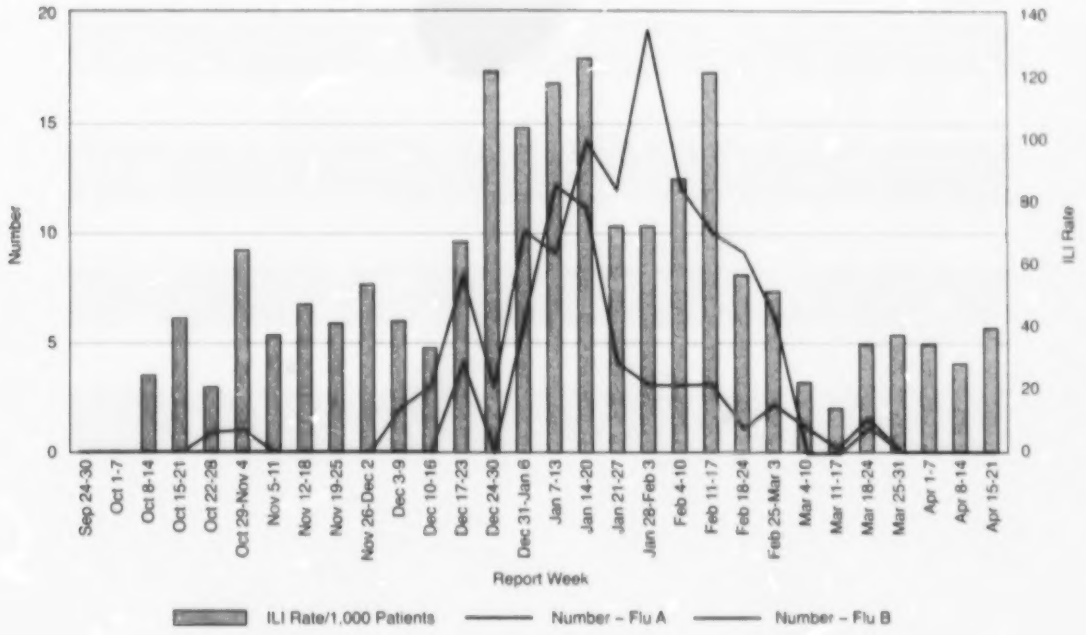
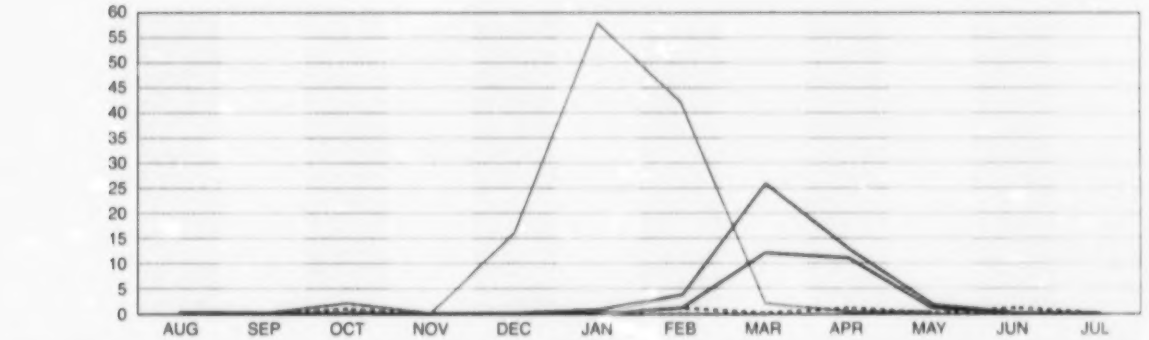


Figure 7. Influenza B: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

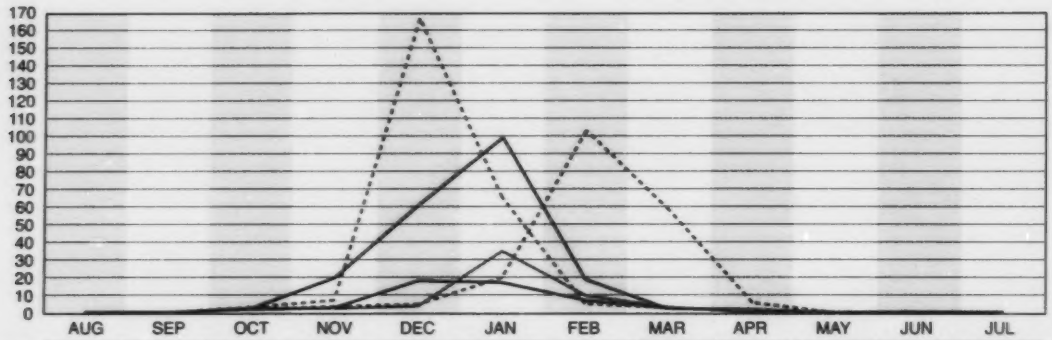
* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			0	0	0	1	4	26	13	2	0	0
1997/1998	0	0	0	0	0	0	1	0	1	0	1	0
1998/1999	0	0	0	0	0	0	1	12	11	1	0	0
1999/2000	0	0	1	0	0	0	0	0	1	0	0	0
2000/2001	0	0	2	0	16	58	42	2	0	0		

Figure 5. Influenza A: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
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1997/1998	0	0	1	1	5	20	103	58	6	0	1	1
1998/1999	0	0	0	20	61	99	19	1	2	0	0	0
1999/2000	0	0	3	7	166	65	5	0	1	1	0	0
2000/2001	0	0	0	0	4	35	10	2	0	0		

Table 5. Number (%) of Cases of Influenza A and Influenza B by Age Group, Manitoba, 2000/2001

	Influenza A		Influenza B	
Age Group	**#**	**%**	**#**	**%**
<1	20	39.2	18	15.0
1-4	10	19.6	15	12.5
5-9	2	3.9	8	6.7
10-14	1	2.0	5	4.2
15-19	7	13.7	8	6.7
20-24	3	5.9	7	5.8
25-29	0	0.0	6	5.0
30-39	2	3.9	13	10.8
40-49	5	9.8	11	9.2
50-59	0	0.0	6	5.0
60-69	0	0.0	2	1.7
70-79	0	0.0	8	6.7
80+	1	2.0	13	10.8
Total	**51**	**100.0**	**120**	**100.0**

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Oseltamivir was used to control several Influenza B outbreaks with apparent success. However, illness appeared to be mild and in several instances within personal care homes, initial cases did not evolve into outbreaks, making the value of Oseltamivir difficult to determine.

Figure 6. Influenza-like Illness and Number of Laboratory-confirmed Cases of Influenza by Report Week, Manitoba, 2000/2001 Season

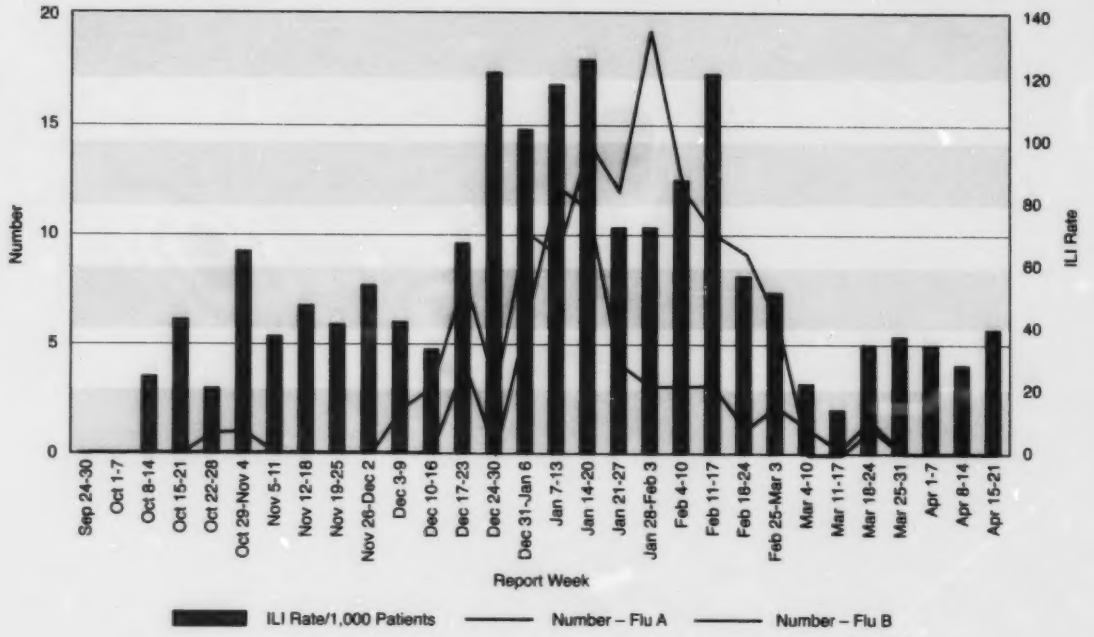
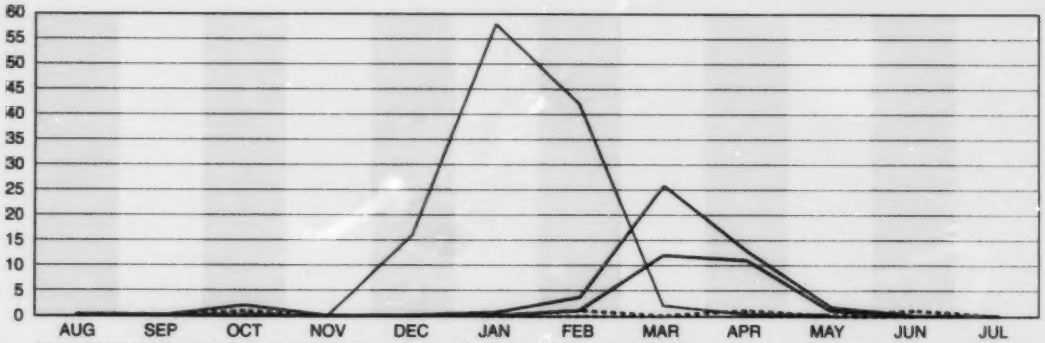


Figure 7. Influenza B: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			0	0	0	1	4	26	13	2	0	0
1997/1998	0	0	0	0	0	0	1	0	1	0	1	0
1998/1999	0	0	0	0	0	0	1	12	11	1	0	0
1999/2000	0	0	1	0	0	0	0	0	1	0	0	0
2000/2001	0	0	2	0	16	58	42	2	0	0		

Influenza-like Illness

Manitoba participated in the national Flu Watch Program co-ordinated by the Centre for Infectious Disease Prevention and Control (CIDPC), Health Canada, and the College of Family Physicians of Canada. As part of this program, 23 sentinel physicians selected one clinic day per week and recorded the total number of patient visits (denominator) as well as number of patients meeting a pre-established case definition of influenza-like illness (ILI)[1] (numerator). This information was subsequently forwarded to Health Canada where ILI rates were calculated. In addition to reporting ILI, several of the sentinel physicians agreed to submit two swabs from individuals meeting the ILI case definition on a weekly basis.

The College directly recruited sentinel physicians. However, for the 2000/2001 season, two physicians in Manitoba also prepared a cover letter supporting the importance of influenza surveillance. Recruitment was population-based by Regional Health Authority.

As illustrated in Figure 6, the rate of influenza-like illness (ILI) peaked at greater than 100 per 1,000 between December 24 and January 20. A similar peak was observed the week of February 11th.

School-based Surveillance

Sixty-nine kits were distributed to public health staff across the province (six swabs/kit). Two schools submitted specimens late in the season (late January, early February). Influenza B was confirmed in one school while the other was negative.

Assessment of Influenza Activity Level

As part of the National FluWatch program, the influenza activity level for each Regional Health Authority was assigned weekly at the CDC Unit. Activity levels were defined as: (1) no activity; (2) sporadic activity; (3) localized activity; and, (4) widespread activity. Assessment was based on laboratory-confirmation of influenza in the prior four weeks, reports of influenza-like illness, and outbreaks.

Assigned activity levels were forwarded weekly to Health Canada. Maps were subsequently prepared to illustrate influenza activity level by province.

Deaths

While reports of deaths attributable to influenza are known to be incomplete, three deaths were reported to the CDC Unit from the Office of the Chief Medical Examiner.

Dissemination of Information

Information summarizing regional, provincial and national influenza activity during 2000/2001 was routinely prepared and distributed to Regional Health Authorities and Health Canada. Examples include:

- Daily report of influenza activity in Manitoba (Appendix C)
- Weekly report of influenza activity in Manitoba
- Weekly report of influenza-like illness rates
- Weekly reports of influenza activity in Canada (Appendix D)

1 Influenza-like illness: acute onset of respiratory illness with fever and/or cough and with one or more of the following – sore throat, arthralgia, myalgia or prostration—which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

Provincial Program Funding

The total cost of the 2000/2001 provincial influenza immunization program was $1,234,878. Costs included purchase of vaccine, promotional materials, a mass media campaign and targeted influenza immunization initiatives (Table 6).

Table 6. Manitoba Health – Influenza Immunization Program Expenditures 2000/2001

Expenditures:	Actual Costs
Vaccine	**$582,800**
Regional Health Authorities' Administration Costs	
Regular Permanent Pay and Benefits	$379,582
TOTAL ADMINSTRATION COSTS	**$379,582**
Regional Health Authorities' Operation Costs:	
Transportation	$13,399
Telephone	2,448
Advertising	20,487
Postal Services	600
Messenger/Courier	40
Operating Supplies	27,514
Office Supplies	2,659
Accommodations	11,586
Food/Beverage/Meals	2,667
Other (e.g., incentives)	18,939
TOTAL OPERATING COSTS:	**$100,339**
Public Health Branch Promotion Costs:	
Influenza Immunization Resources	$32,175
Newspaper	25,437
Television	65,108
Radio	26,989
Interior Transit and Transit Shelters	14,954
Media Launch	949
Report: Influenza in Manitoba – 1999/00 Season	6,545
TOTAL PROMOTION COSTS:	**$172,157**
TOTAL	**$1,234,878**

Recommendations

1. The CDC Unit should continue to support targeted influenza immunization initiatives during the 2001/2002 season, in collaboration with the RHAs, with the goal of meeting provincial and national influenza immunization targets.
2. Further collaboration with non-governmental health care organizations (e.g., Victorian Order of Nurses, private personal care homes), as well as other government departments should be fostered to promote influenza immunizations and ensure all immunization data are captured.
3. Federal/provincial/territorial governments should collaborate to establish secure and timely access to the influenza vaccine for the 2001/2002 immunization campaign. The new Canadian regulatory requirements for influenza manufacturers should be developed to ensure safe supply. (Impacts from the regulatory requirements may delay vaccine availability to mid-October, hence delaying the 2001/2002 influenza program until early November 2001.)
4. Continue to improve surveillance of influenza immunizations using the Manitoba Immunization Monitoring System (MIMS):
   - RHAs should provide regional coordination of surveillance forms to improve completeness across settings (e.g., hospitals, personal care homes, private agencies, etc.).
   - Manitoba Health, in conjunction with RHAs, should foster collaboration with non-governmental health care organizations (e.g., VON), as well as government departments such as Manitoba Family Services and Housing, to promote immunization and ensure that all immunization data are captured.
   - RHAs/other jurisdictions should make use of the CDC Unit immunization surveillance form.
   - Manitoba Health should continuously upgrade MIMS to facilitate easier and more accurate data entry, including: allow for multiple "reason for immunization" responses per individual immunized to eliminate a pre-defined hierarchy; develop "required" data elements to ensure complete data are collected.
   - Manitoba Health, in conjunction with RHAs, should support localized and/or regional data entry to improve timeliness of analysis and evaluation.
   - Manitoba Health should provide a user-manual and comprehensive training for key MIMS users to facilitate accurate data entry and analysis.
   - RHAs should be responsible for influenza immunization data entry into MIMS within their jurisdiction.
   - RHAs should identify and submit to Manitoba Health denominators for the targeted populations in order to measure progress towards provincial and national goals.
5. The supply of influenza vaccine should be increased to 255,000 doses from 235,000 doses, for the 2001/2002 influenza season, through the Federal/Provincial/Territorial Vaccine Purchase Program.

Provincial Program Funding

The total cost of the 2000/2001 provincial influenza immunization program was $1,234,878. Costs included purchase of vaccine, promotional materials, a mass media campaign and targeted influenza immunization initiatives (Table 6).

Table 6. Manitoba Health – Influenza Immunization Program Expenditures 2000/2001

Expenditures:	Actual Costs
Vaccine	$582,800
Regional Health Authorities' Administration Costs	
Regular Permanent Pay and Benefits	$379,582
TOTAL ADMINSTRATION COSTS	$379,582
Regional Health Authorities' Operation Costs:	
Transportation	$13,399
Telephone	2,448
Advertising	20,487
Postal Services	600
Messenger/Courier	40
Operating Supplies	27,514
Office Supplies	2,659
Accommodations	11,586
Food/Beverage/Meals	2,667
Other (e.g., incentives)	18,939
TOTAL OPERATING COSTS:	$100,339
Public Health Branch Promotion Costs:	
Influenza Immunization Resources	$32,175
Newspaper	25,437
Television	65,108
Radio	26,989
Interior Transit and Transit Shelters	14,954
Media Launch	949
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   - RHAs should be responsible for influenza immunization data entry into MIMS within their jurisdiction.
   - RHAs should identify and submit to Manitoba Health denominators for the targeted populations in order to measure progress towards provincial and national goals.
5. The supply of influenza vaccine should be increased to 255,000 doses from 235,000 doses, for the 2001/2002 influenza season, through the Federal/Provincial/Territorial Vaccine Purchase Program.

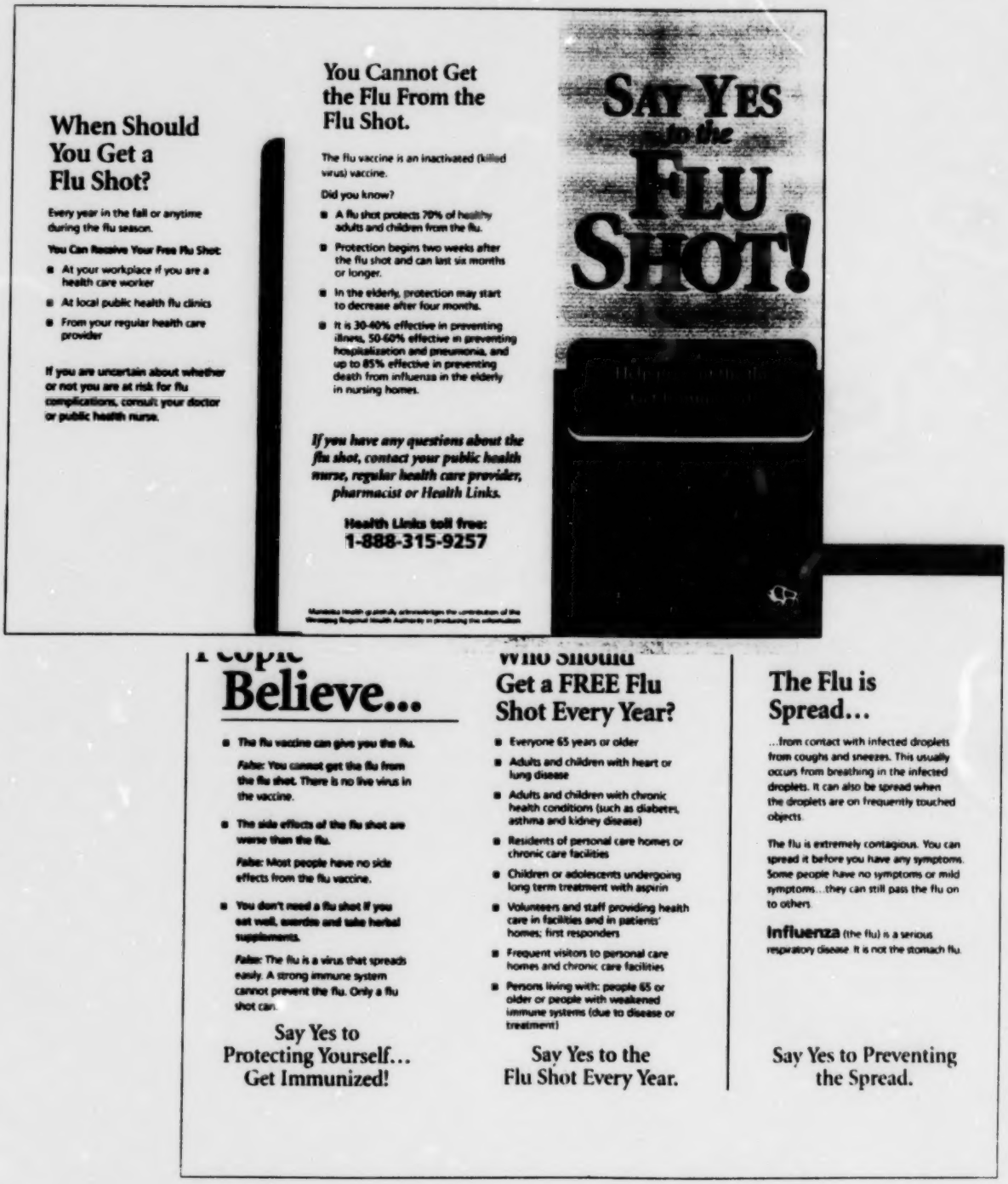
6. Updated annual information on influenza immunization recommendations should continue to be disseminated in August 2001. Updates should occur as required.
7. The CDC Unit should continue to fund an Influenza Prevention Co-ordinator position. This co-ordinator should continue to work with regional immunization co-ordinators to promote, monitor and provide advice on the influenza program. Regular teleconferencing between the provincial and regional immunization coordinators is one means of collaborating and problem solving; this practice should be continued.
8. Influenza immunization promotional materials should be distributed in early September 2001.
9. RHAs should promote influenza immunization by advertising clinics well in advance.
10. RHAs should continue to prioritize influenza immunization of health care workers through education, improved access, incentives and other evidence-based strategies, to gain support and improve uptake of influenza immunization among health care providers.
11. Collaboration with key stakeholders at the First Nations and Inuit Health Branch of Health Canada and the Manitoba Tribal Councils is necessary to establish a partnership to promote all immunization programs.
12. The annual influenza program should continue to build our health system capacity as part of preparations for pandemic influenza planning and response.
13. The influenza home page on the Manitoba Health Web site should be further developed to provide timely, accurate information to health care professionals and the general public. The product monograph for the influenza vaccine should be available on this Web site.
14. The CDC Unit should provide funds for the influenza immunization program at the rate of $7 per dose administered by public health, as supported by documentation through MIMS. This funding represents the CDC Unit's contribution to regional costs associated with the program including: MIMS data entry, vaccine administration and supplies, promotion/incentives and all staffing costs.
15. Payments should be maintained to physicians for immunization of health care workers (initiated in 1998).
16. The CDC Unit should continue to support investigations of influenza epidemics in facilities and communities in conjunction with Medical Officers of Health and RHA staff.
17. An annual influenza/pneumococcal symposium should be held to evaluate best practices and plan for the upcoming season.

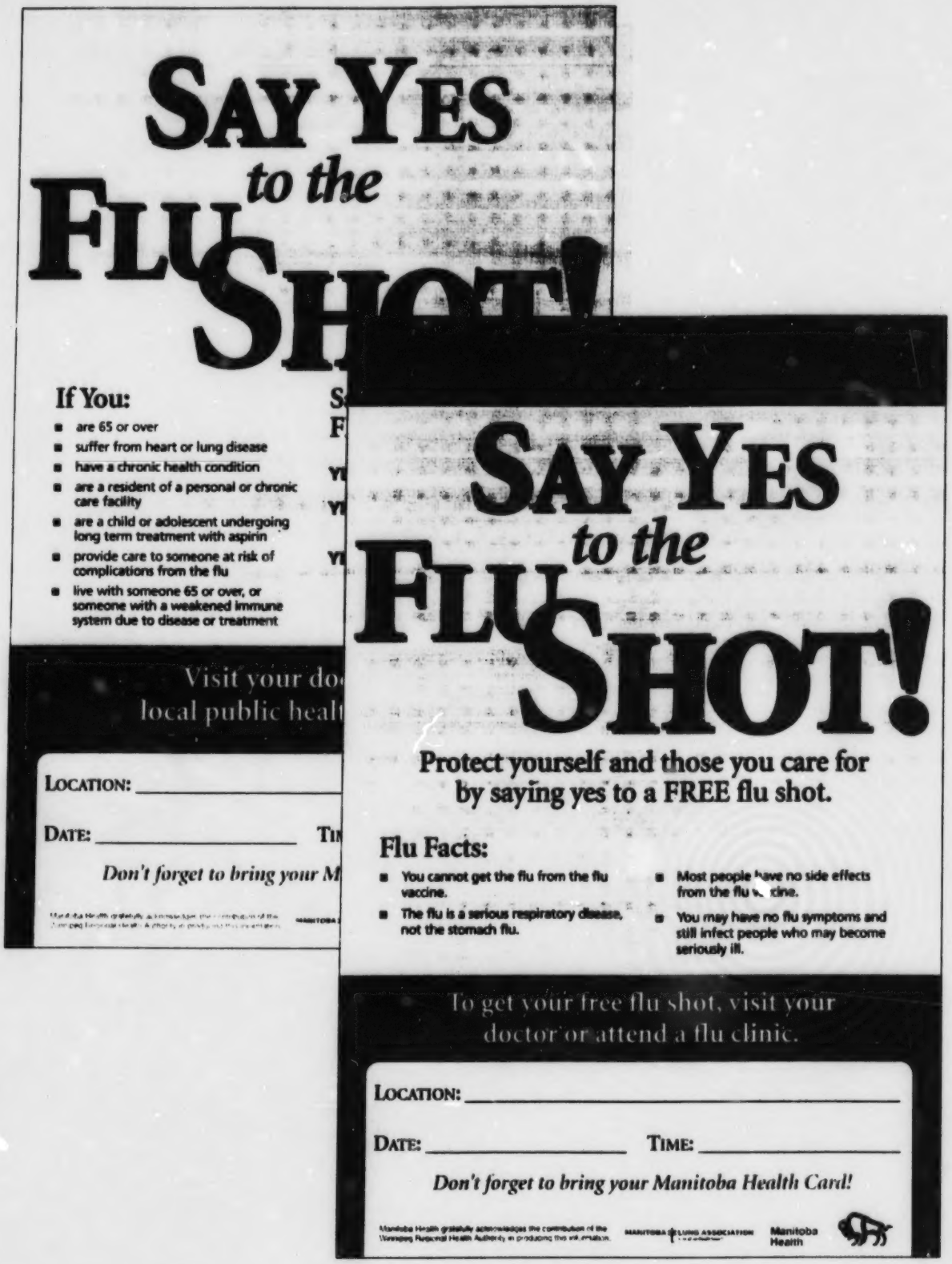
Summary

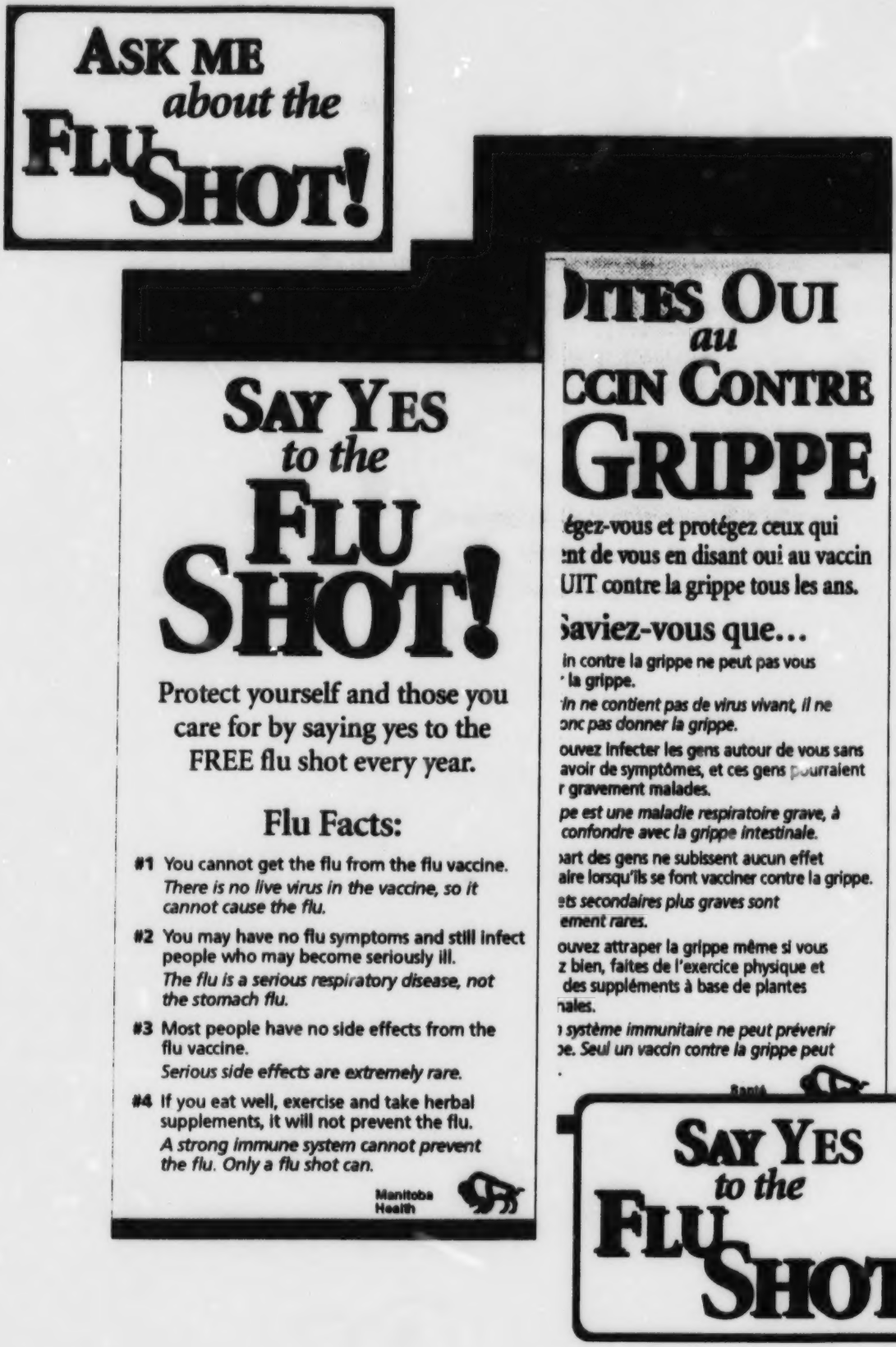
The CDC Unit will continue with its commitment to maintaining and improving the annual influenza immunization program to promote the optimal health of Manitobans and efficient use of health care resources.

Appendix A

Promotional Materials


When Should You Get a Flu Shot?
Every year in the fall or anytime during the flu season.
You Can Receive Your Free Flu Shot:
At your workplace if you are a health care worker
At local public health flu clinics
From your regular health care provider
If you are uncertain about whether or not you are at risk for flu complications, consult your doctor or public health nurse.
You Cannot Get the Flu From the Flu Shot.
The flu vaccine is an inactivated (killed virus) vaccine.
Did you know?
A flu shot protects 70% of healthy adults and children from the flu.
Protection begins two weeks after the flu shot and can last six months or longer.
In the elderly, protection may start to decrease after four months.
It is 30-40% effective in preventing illness, 50-60% effective in preventing hospitalization and pneumonia, and up to 85% effective in preventing death from influenza in the elderly in nursing homes.
If you have any questions about the flu shot, contact your public health nurse, regular health care provider, pharmacist or Health Links.
Health Links toll free:
1-888-315-9257
SAY YES to the FLU SHOT!
Believe...
The flu vaccine can give you the flu.
False: You cannot get the flu from the flu shot. There is no live virus in the vaccine.
The side effects of the flu shot are worse than the flu.
False: Most people have no side effects from the flu vaccine.
You don't need a flu shot if you eat well, exercise and take herbal supplements.
False: The flu is a virus that spreads easily. A strong immune system cannot prevent the flu. Only a flu shot can.
Say Yes to Protecting Yourself... Get Immunized!
Who Should Get a FREE Flu Shot Every Year?
Everyone 65 years or older
Adults and children with heart or lung disease
Adults and children with chronic health conditions (such as diabetes, asthma and kidney disease)
Residents of personal care homes or chronic care facilities
Children or adolescents undergoing long term treatment with aspirin
Volunteers and staff providing health care in facilities and in patients' homes; first responders
Frequent visitors to personal care homes and chronic care facilities
Persons living with: people 65 or older or people with weakened immune systems (due to disease or treatment)
Say Yes to the Flu Shot Every Year.
The Flu is Spread...
...from contact with infected droplets from coughs and sneezes. This usually occurs from breathing in the infected droplets. It can also be spread when the droplets are on frequently touched objects.
The flu is extremely contagious. You can spread it before you have any symptoms. Some people have no symptoms or mild symptoms...they can still pass the flu on to others.
Influenza (the flu) is a serious respiratory disease. It is not the stomach flu.
Say Yes to Preventing the Spread.


SAY YES
to the
FLU SHOT!
If You:
are 65 or over
suffer from heart or lung disease
have a chronic health condition
are a resident of a personal or chronic care facility
are a child or adolescent undergoing long term treatment with aspirin
provide care to someone at risk of complications from the flu
live with someone 65 or over, or someone with a weakened immune system due to disease or treatment
Visit your doc
local public healt
LOCATION:
DATE:
Don't forget to bring your M
SAY YES
to the
FLU SHOT!
Protect yourself and those you care for by saying yes to a FREE flu shot.
Flu Facts:
You cannot get the flu from the flu vaccine.
The flu is a serious respiratory disease, not the stomach flu.
Most people have no side effects from the flu vaccine.
You may have no flu symptoms and still infect people who may become seriously ill.
To get your free flu shot, visit your doctor or attend a flu clinic.
LOCATION:
DATE:
TIME:
Don't forget to bring your Manitoba Health Card!
Manitoba Health


ASK ME
about the
FLU SHOT!
SAY YES
to the
FLU
SHOT!
Protect yourself and those you care for by saying yes to the FREE flu shot every year.
Flu Facts:
#1 You cannot get the flu from the flu vaccine.
There is no live virus in the vaccine, so it cannot cause the flu.
#2 You may have no flu symptoms and still infect people who may become seriously ill.
The flu is a serious respiratory disease, not the stomach flu.
#3 Most people have no side effects from the flu vaccine.
Serious side effects are extremely rare.
#4 If you eat well, exercise and take herbal supplements, it will not prevent the flu.
A strong immune system cannot prevent the flu. Only a flu shot can.
Manitoba Health
DITES OUI
au
CCIN CONTRE
GRIPPE
égez-vous et protégez ceux qui
nt de vous en disant oui au vaccin
UIT contre la grippe tous les ans.
Saviez-vous que...
in contre la grippe ne peut pas vous
la grippe.
in ne contient pas de virus vivant, il ne
onc pas donner la grippe.
ouvez infecter les gens autour de vous sans
avoir de symptômes, et ces gens pourraient
r gravement malades.
pe est une maladie respiratoire grave, à
confondre avec la grippe intestinale.
art des gens ne subissent aucun effet
aire lorsqu'ils se font vacciner contre la grippe.
ets secondaires plus graves sont
ement rares.
ouvez attraper la grippe même si vous
z bien, faites de l'exercice physique et
des suppléments à base de plantes
nales.
système immunitaire ne peut prévenir
e. Seul un vaccin contre la grippe peut
Santé
SAY YES
to the
FLU SHOT!

Influenza Fact Sheet

Manitoba Health
Public Health Branch

COMMUNICABLE DISEASE CONTROL

What is influenza (the flu)?

- A viral illness spread from person to person by coughing or through contact with nasal fluids.
- Symptoms are usually more serious than a cold.
- Symptoms may include fever, headache, cough, muscle aches, runny nose, sore throat and exhaustion.
- Symptoms can be similar to other viral illnesses. However, onset of the flu is usually more sudden.
- Some people may carry the flu virus but have no flu symptoms.
- Illness lasts two to seven days, but it can be longer in the elderly and in people with chronic diseases.
- The period from exposure to the virus to the onset of illness is one to three days.
- The flu arrives in Manitoba every year in late fall or early winter.

How can you protect yourself and others against influenza?

Yearly vaccination is the best way!

- Annual influenza immunization campaigns are held every fall.
- Manitoba Health offers free vaccine to people who are "at risk" and their caregivers.

Other ways include:

- Wash your hands often, particularly after coughing or touching your nose.
- Keep your hands out of your eyes and away from your nose.
- Avoid crowded areas if possible to reduce exposure to people who are ill.
- Stay home if you are sick.
- Cover your mouth when you cough.

Do not visit patients in hospitals or personal care homes if you have cold or flu symptoms.

Who is "at risk" for influenza and should receive the vaccine?

- Residents of nursing homes and other chronic care facilities.
- Anyone with chronic heart or lung disease.
- Anyone with cancer, anemia or a weakened immune system due to disease or medication.
- Persons with other chronic conditions such as diabetes, kidney disease, inflammatory bowel disease, celiac disease, rheumatoid arthritis, lupus, alcoholism and multiple sclerosis may also benefit.
- Anyone 65 years or over.
- Children on long-term aspirin therapy.
- People living in households with "at risk" individuals who are likely to have a weaker response to vaccine, such as those 65 years and over and those with a weakened immune system due to disease or medication.
- Health care workers and other personnel in settings where care is provided for those at high risk. Health care workers should be immunized because they may unknowingly spread influenza to patients. (You may carry the flu virus without having typical flu symptoms.)

What is the flu vaccine?

- The vaccine is an inactivated (killed virus) vaccine that contains three different virus strains. It is prepared in eggs.
- You cannot get influenza from the vaccine because it is made from inactive virus.
- It is important to be immunized against the flu every year because the virus that causes the flu changes every year and because protection from the vaccine decreases with time.

How effective is the flu vaccine?

- Influenza vaccination protects about 70% of healthy children and adults.
- Studies involving nursing home residents have shown influenza vaccine to be 50-60% effective in preventing hospitalization and 85% effective in preventing death.
- Protection from the flu begins approximately two weeks following immunization and can last for six months or longer. In the elderly protection may start to decrease after four months.

How is the flu vaccine given?

- The flu vaccine is given with a needle into the muscle of the upper arm.

What are common side effects of the influenza vaccine?

- Local reactions can include soreness and redness at the injection site for up to two days.
- Other reactions can include fever, headache or myalgia (tenderness or pain in the muscles).
- If these symptoms persist or become worse, seek medical advice.

Rare side effects

- Some studies have suggested a very rare increased risk of Guillain-Barré syndrome, a form of paralysis that is usually temporary.
- Reactions such as allergic responses, severe pain or swelling are very rare and should be reported to your public health nurse or doctor.

Who should not get the flu vaccine?

- Infants younger than six months of age.
- Anyone who has a severe allergy to egg protein, formaldehyde, gelatin, neomycin or thimerosal (check with your public health nurse or doctor because vaccine content varies by manufacturer).
- Anyone who has a serious acute illness, with or without a fever, on the day they are to be immunized. A mild illness, with or without a low fever, is not a reason to avoid immunization.
- Persons known to have developed Guillain-Barré syndrome within six weeks of a previous influenza vaccination.

What should you do if you think you have the flu?

- Most people can manage the flu at home with plenty of rest, fluids and acetaminophen for fever control and muscle aches. Do NOT give ASA to children.
- Antibiotics do not help unless bacterial complications develop.
- Some people, particularly those in high-risk groups, can become quite ill and may require medical attention.
- You should see your doctor if:
  - you have a cough with cloudy phlegm, especially with persistent high fever;
  - you have difficulty breathing, or are not getting better after trying rest, fluids and acetaminophen;
  - you have a small child with a high fever.

If you have any concerns, contact your doctor, local public health nurse or Health Links, Winnipeg at 788-8200 or toll-free at 1-888-315-9257.

Local Public Health Unit Stamp

MG-7061
Influenza Fact Sheet
Printed July 2000

Manitoba Health
Public Health Branch

INFLUENZA and PNEUMOCOCCAL VACCINE

Groups Eligible for Free Vaccine

(As of September 2000)

ps eligible for free vaccine under toba Health program	Pneumococcal Vaccine	Influenza Vaccine
aged 65 years and older	X (beginning March 2001)	X
nts of long-term care or c care facilities	X	X
and children (> 2 years old) with chronic conditions, such as lung disease, heart dney disease, diabetes, aspleenia, splenic ction, immunosuppression (due to or therapy)	X (including asthma)	X (including asthma)
en and adolescents being treated for eriods with acetylsalicylic acid (ASA)		X
Health care workers and other personnel who have significant contact with high-risk individuals		X
People at high risk of complications travelling to destinations where influenza is likely to be circulating		X
Household contacts (including children) of: persons who are immunocompromised or ≥ 65 years old		X

Immunization Record

Name

	Date (yyyy/mm/dd)	Lot No.

Appendix B

Influenza Immunization Surveillance Form

Influenza and Pneumococcal Vaccine Surveillance – 2000/2001 Season

Manitoba Health
Public Health Branch

Personal Care Home/Chronic Care Facility: _____

City/Town/Municipality: _____ Regional Health Authority: _____

Contact Person: _____ Phone: _____

Last Name (please print)	Given Name (please print)	PHIN (if Applic)	Date of Birth (YYYY/MM/DD)	Gender	Reason for Immunization			Vaccines Given		Date of Immunization (YYYY/MM/DD)
					≥65 Yrs ≤	High Risk <65 Years	Health Care Staff*	Pneumo	Flu	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	
				☐M ☐F	☐	☐	☐	☐	☐	

* Health care staff eligible for influenza vaccine only.

Appendix C

Daily Report of Influenza Activity in Manitoba
Report Date: May 22, 2001

Laboratory-confirmed Influenza

- Reports of culture isolations from the Cadham Provincial Laboratory (CPL) are forwarded to the Communicable Disease Control (CDC) Unit daily. The number of positive cultures is an underestimate of the total number of cases, since not all persons with influenza seek medical attention, and of those that do, not all are cultured for the virus.
- While culture isolations comprise the largest number of reports from CPL, seroconversions are similarly forwarded to the CDC Unit daily.
- Information contained within this update is based on positive lab reports received at the CDC Unit as of **May 22, 2001**.
- The specimen date (*acute* specimen date for seroconversions) is used to:
  - (a) extract cases; and,
  - (b) assign cases to the appropriate week/month

Influenza A

- There have been **51** cases of Influenza A reported this season in Manitoba.
- Refer to Table 1 for a summary of cases by Regional Health Authority (RHA) and report week.
- Refer to Table 2 for a summary of cases by age-group.
- Refer to Figure 1 for an illustration of the number of laboratory-confirmed cases by month and year in Manitoba, 1996/1997 to 2000/2001.
- Refer to Figure 2 for an illustration of the number of influenza tests and percent positive by report week.
- For national surveillance data, refer to: http://www.hc-sc.gc.ca/hpb/lcdc/bid/respdis/fluwatch

Influenza B

- There have been **120** cases of Influenza B reported this season in Manitoba.
- Refer to Table 1 for a summary of cases by Regional Health Authority (RHA) and report week.
- Refer to Table 2 for a summary of cases by age-group.
- Refer to Figure 3 for an illustration of the number of laboratory-confirmed cases by month and year in Manitoba, 1996/1997 to 2000/2001.
- Refer to Figure 2 for an illustration of the number of influenza tests and percent positive by report week.
- For national surveillance data, refer to: http://www.hc-sc.gc.ca/hpb/lcdc/bid/respdis/fluwatch

Suspected/Confirmed Reports of Influenza Outbreaks

- Reports of suspected/confirmed influenza outbreaks are directed to the CDC Unit by:
  - (a) a phone call from public health staff within a RHA;
  - (b) a phone call from CPL advising of the assignment of an outbreak code;
  - (c) completion and submission of an outbreak form.
- The information contained within this update is based on reports as of Thursday, April 5, 2001.
- There have been **18** reports of suspected/confirmed influenza outbreaks within health care facilities.

M121

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Table 1. Number of Cases of Influenza A and B by Regional Health Authority and Report Week

Influenza A – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of / RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	5
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Winnipeg	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	5	3	6	2	3	0	0	0	1	0	0	0	0	0	0	0	24
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	12	11	4	3	3	3	1	2	1	0	1	0	0	0	0	51

Influenza B – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of / RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	2	3	5	2	4	0	1	1	0	0	0	0	0	0	0	24
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	3
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
Norman	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	0	1	0	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	3	0	1	0	0	0	0	0	0	0	0	8
South Eastman	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	8
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Winnipeg	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	3	4	7	6	7	4	8	4	4	0	0	0	0	0	0	0	52
TOTAL	0	0	0	0	0	1	1	0	0	0	0	2	3	8	3	10	9	14	12	19	12	10	9	6	0	0	1	0	0	0	0	120

National Flu Watch Program

- Manitoba Health participates in the National Flu Watch Program coordinated by Health Canada and the College of Family Physicians of Canada. In addition to laboratory-confirmation of influenza, this program relies on weekly reports of influenza-like illness (ILI) as reported by 23 sentinel physicians from across the province. The CDC Unit receives *weekly* reports from Health Canada presenting the provincial ILI rate. In addition, these same data are available for each of the participating sentinel physicians. Using this information, the ILI rate may be estimated for each RHA.
- For the 2000/2001 season, ILI in the general population was defined as:

  Acute onset of respiratory illness with fever and/or cough and with one or more of the following—sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.
- Refer to Figure 4 for an illustration of the ILI rate and number of laboratory-confirmed cases of Influenza A and Influenza B.

Influenza-related Deaths

- Reporting of influenza-related deaths is *incomplete*. Reports are based on notification by:

  (a) Chief Medical Examiner;

  (b) Medical Officer of Health
- Three deaths suspected as attributable to Influenza have been reported.

Table 2. Number (%) of Cases of Influenza A and Influenza B by Age Group, Manitoba, 2000/2001

	Influenza A		Influenza B	
Age Group	**#**	**%**	**#**	**%**
<1	20	39.2	18	15.0
1-4	10	19.6	15	12.5
5-9	2	3.9	8	6.7
10-14	1	2.0	5	4.2
15-19	7	13.7	8	6.7
20-24	3	5.9	7	5.8
25-29	0	0.0	6	5.0
30-39	2	3.9	13	10.8
40-49	5	9.8	11	9.2
50-59	0	0.0	6	5.0
60-69	0	0.0	2	1.7
70-79	0	0.0	8	6.7
80+	1	2.0	13	10.8
Total	**51**	**100.0**	**120**	**100.0**

Table 1. Number of Cases of Influenza A and B by Regional Health Authority and Report Week

Influenza A – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	5
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Winnipeg	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	5	3	6	2	3	0	0	0	1	0	0	0	0	0	0	0	24
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	12	11	4	3	3	3	1	2	1	0	1	0	0	0	0	51

Influenza B – Number of Cases by RHA and Week (weeks are defined as Sunday to Saturday and are based on specimen date)

Week of RHA	Aug/Sep	Sep 24-Sep 30	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28	Oct 29-Nov 4	Nov 5-11	Nov 12-18	Nov 19-25	Nov 26-Dec 2	Dec 3-9	Dec 10-16	Dec 17-23	Dec 24-30	Dec 31-Jan 6	Jan 7-13	Jan 14-20	Jan 21-27	Jan 28-Feb 3	Feb 4-10	Feb 11-17	Feb 18-24	Feb 25-Mar 3	Mar 4-10	Mar 11-17	Mar 18-24	Mar 25-31	Apr 1-7	Apr 8-14	Apr 15-21	Apr 22-28	Total
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Burntwood	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	6
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	2	3	5	2	4	0	1	1	0	0	0	0	0	0	0	24
Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	3
Marquette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
Norman	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	0	1	0	0	0	0	6
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	3	0	1	0	0	0	0	0	0	0	0	8
South Eastman	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	8
South Westman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Winnipeg	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	3	4	7	6	7	4	8	4	4	0	0	0	0	0	0	0	52
TOTAL	0	0	0	0	0	1	1	0	0	0	0	2	3	8	3	10	9	14	12	19	12	10	9	6	0	0	1	0	0	0	0	120

National Flu Watch Program

- Manitoba Health participates in the National Flu Watch Program coordinated by Health Canada and the College of Family Physicians of Canada. In addition to laboratory-confirmation of influenza, this program relies on weekly reports of influenza-like illness (ILI) as reported by 23 sentinel physicians from across the province. The CDC Unit receives *weekly* reports from Health Canada presenting the provincial ILI rate. In addition, these same data are available for each of the participating sentinel physicians. Using this information, the ILI rate may be estimated for each RHA.
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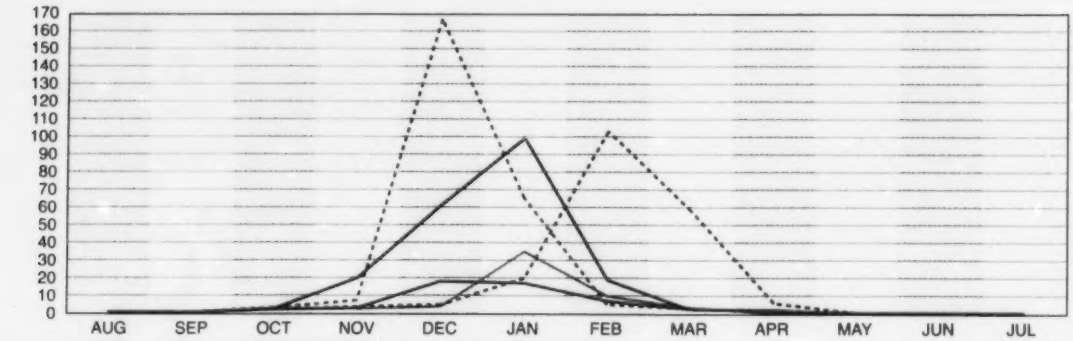
60-69	0	0.0	2	1.7
70-79	0	0.0	8	6.7
80+	1	2.0	13	10.8
Total	**51**	**100.0**	**120**	**100.0**

Figure 1. Influenza A: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			2	0	18	17	7	1	0	0	0	0
1997/1998	0	0	1	1	5	20	103	58	6	0	1	1
1998/1999	0	0	0	20	61	99	19	1	2	0	0	0
1999/2000	0	0	3	7	166	65	5	0	1	1	0	0
2000/2001	0	0	0	0	4	35	10	2	0	0		

Figure 2. Influenza A and Influenza B: Number of Tests and Percent Positive, Manitoba, 2000/2001

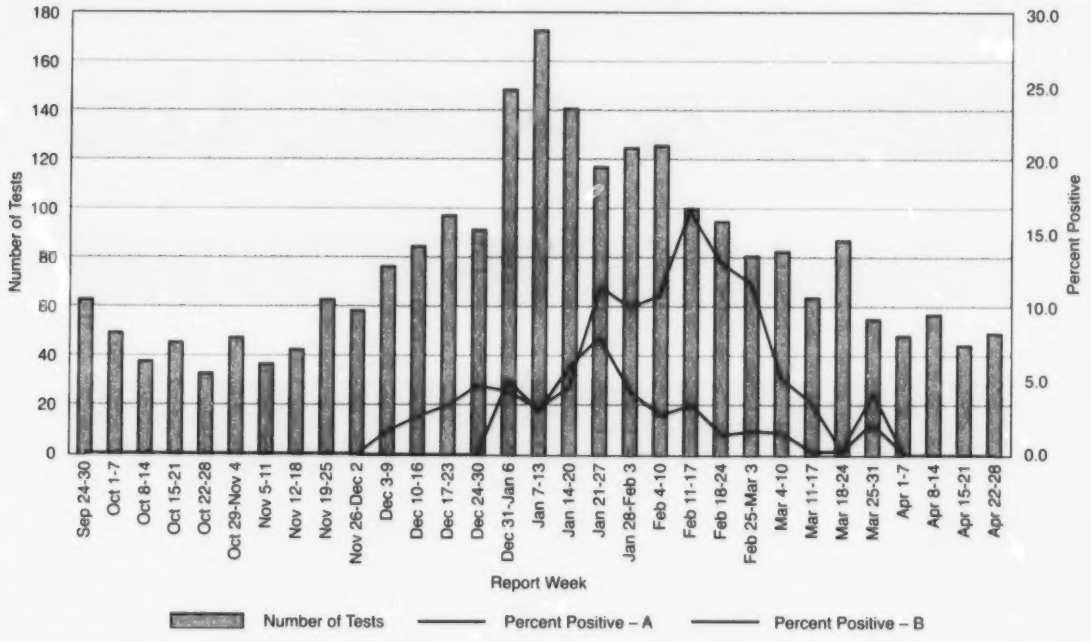
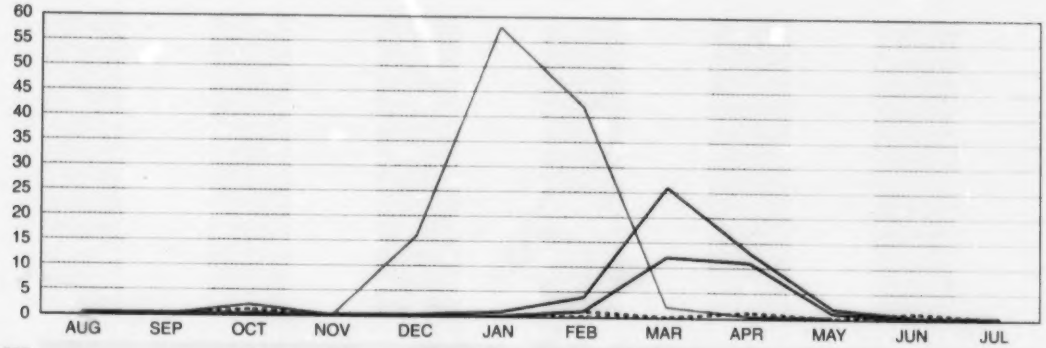


Figure 3. Influenza B: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			0	0	0	1	4	26	13	2	0	0
1997/1998	0	0	0	0	0	0	1	0	1	0	1	0
1998/1999	0	0	0	0	0	0	1	12	11	1	0	0
1999/2000	0	0	1	0	0	0	0	0	1	0	0	0
2000/2001	0	0	2	0	18	58	42	2	0	0		

Figure 4. Influenza: Influenza-like Illness and Number of Laboratory-confirmed Cases of Influenza by Report Week, Manitoba, 2000/2001 Season

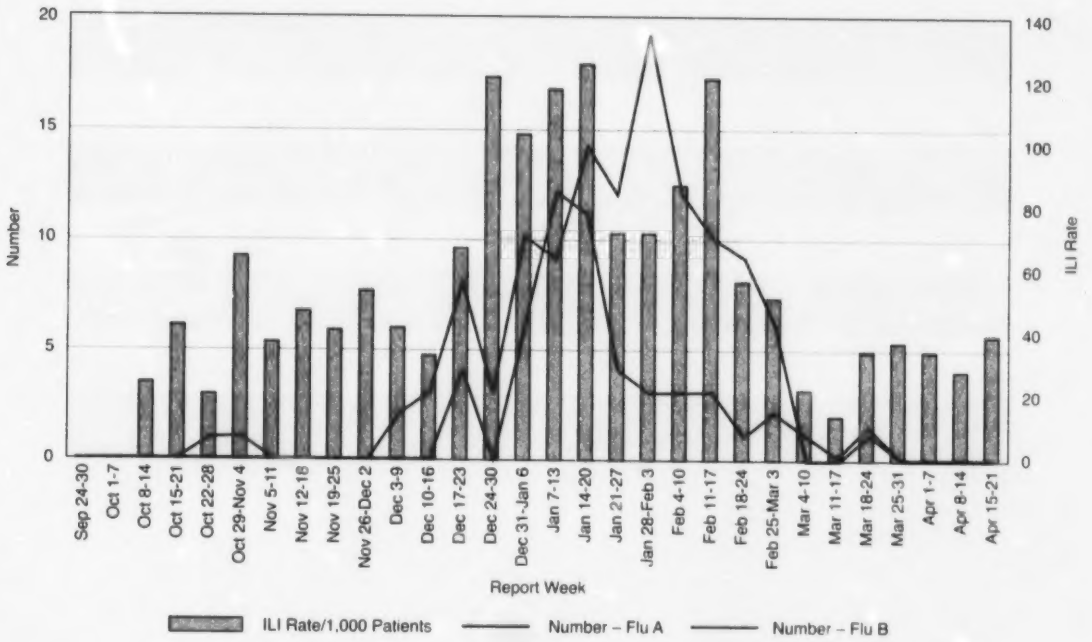
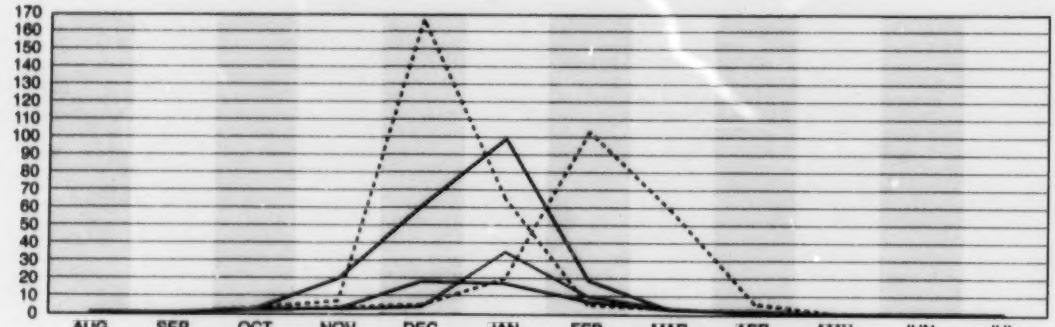


Figure 1. Influenza A: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			2	0	18	17	7	1	0	0	0	0
1997/1998	0	0	1	1	5	20	103	58	6	0	1	1
1998/1999	0	0	0	20	61	99	19	1	2	0	0	0
1999/2000	0	0	3	7	166	65	5	0	1	1	0	0
2000/2001	0	0	0	0	4	35	10	2	0	0		

Figure 2. Influenza A and Influenza B: Number of Tests and Percent Positive, Manitoba, 2000/2001

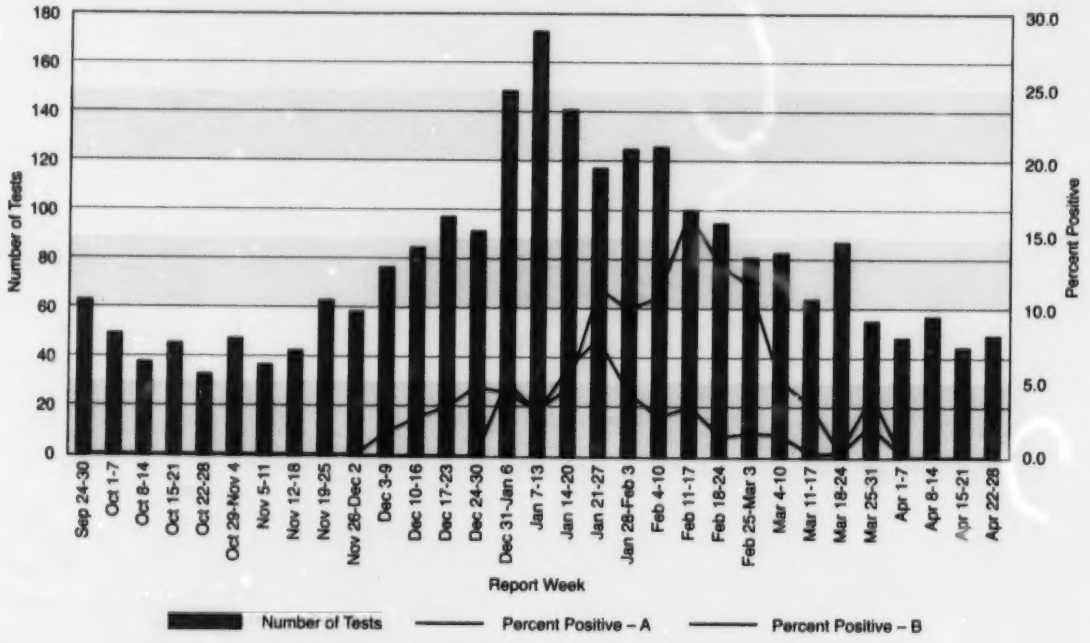
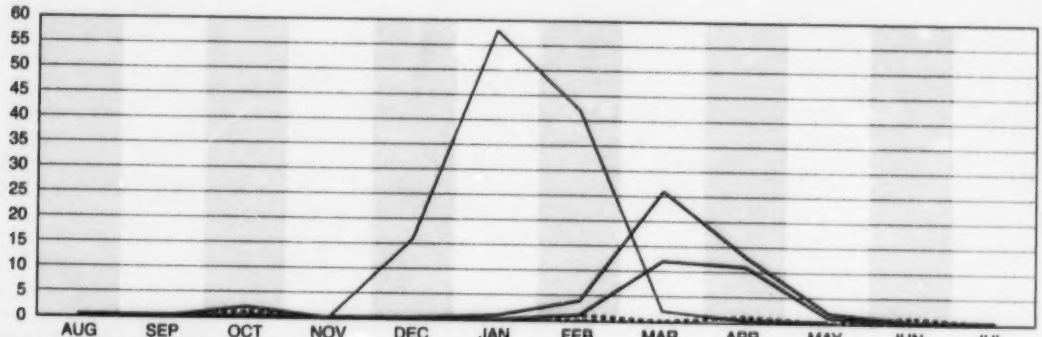


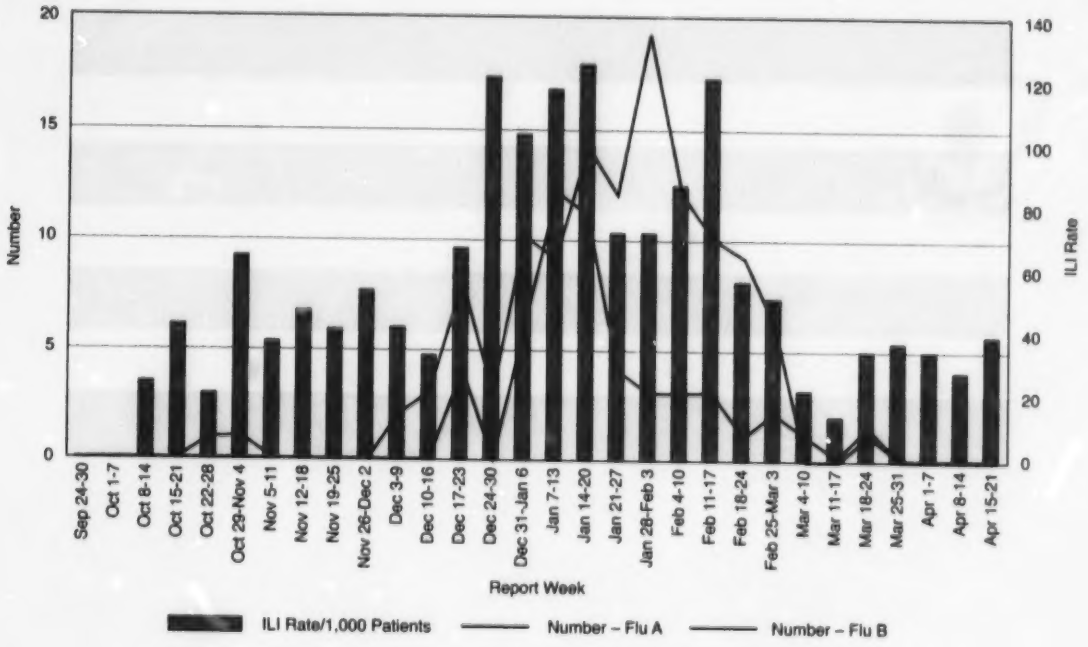
Figure 3. Influenza B: Number of Laboratory-confirmed Cases, 1996/1997-2000/2001*

* Based on specimen date (cases reported to May 22, 2001)



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
1996/1997			0	0	0	1	4	28	13	2	0	0
1997/1998	0	0	0	0	0	0	1	0	1	0	1	0
1998/1999	0	0	0	0	0	0	1	12	11	1	0	0
1999/2000	0	0	1	0	0	0	0	0	1	0	0	0
2000/2001	0	0	2	0	16	56	42	2	0	0		

Figure 4. Influenza: Influenza-like Illness and Number of Laboratory-confirmed Cases of Influenza by Report Week, Manitoba, 2000/2001 Season



Appendix D

Flu Watch

April 15 to April 21, 2001 (Week 16)

(Reprinted with the permission of Health Canada)

Canada: The week ending April 21, 2001 was the final week of surveillance of influenza-like illness for the 2000-2001 influenza season. Although laboratory influenza surveillance will continue throughout the summer, this report is the last weekly FluWatch report for this season. FluWatch reports will resume again in October 2001 for the 2001-2002 influenza surveillance season. During the week ending April 21, 2001, there were no regions reporting widespread activity; one region reported localised activity; 5 regions reported sporadic activity; and 22 regions reported no influenza-like activity (25 regions did not report) (see maps). During the same week, sentinel physicians reported 7 cases of influenza-like illness (ILI) per 1,000 patient visits and the Centre for Infectious Disease Prevention & Control received 735 reports of laboratory tests for influenza viruses: 18 (2%) were positive; 12 were influenza A and 6 were influenza B (see table). Since the beginning of the 2000-2001 season, there have been 219 reported outbreaks; 49 at long term care facilities, 6 at hospitals, and 164 at other sites.

United States: There is no report for this week from CDC. CDC: <http://www.cdc.gov/ncidod/diseases/flu/weekly.htm>

International: During week 16, no widespread activity was reported. Low levels of activity were reported, with sporadic outbreaks occurring (WHO, EISS). Influenza B activity is predominating in most European countries (EISS).

EISS (Europe): <http://www.eiss.org/cgi-files/bulletin.cgi>

WHO: <http://oms2.b3e.jussieu.fr/flunet/activity.html>

Reported number of influenza virus (FV) tests performed and positive influenza virus tests by province of participating laboratories, Canada, 2000-2001

Province of reporting laboratories	April 15, 2001-April 21, 2001				August 27, 2000-April 21, 2001			
	Total FV Tests	Positive Tests			Total FV Tests	Positive Tests		
		Type A	Type B	Total		Type A	Type B	Total
NF	34	0	0	0	944	28	102	130
PE	5	0	0	0	104	2	18	20
NB	6	0	0	0	614	44	95	139
NS	0	0	0	0	897	33	150	183
QC	0	0	0	0	8,874	246	710	956
ON	352	8	6	14	15,891	400	452	852
MB	43	0	0	0	2,511	44	110	154
SK	90	3	0	3	4,829	161	445	606
AB	176	1	0	1	9,603	248	543	791
BC	29	0	0	0	2,069	118	205	323
Canada	735	12	6	18	46,336	1,324	2,830	4,154

Specimens from NT, YT, and NU are sent to reference laboratories in other provinces.

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EISS (Europe): <http://www.eiss.org/cgi-files/bulletin.cgi>

WHO: <http://oms2.b3e.jussieu.fr/flunet/activity.html>

Reported number of influenza virus (FV) tests performed and positive influenza virus tests by province of participating laboratories, Canada, 2000-2001

Province of reporting laboratories	April 15, 2001-April 21, 2001				August 27, 2000-April 21, 2001			
	Total FV Tests	Positive Tests			Total FV Tests	Positive Tests		
		Type A	Type B	Total		Type A	Type B	Total
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PE	5	0	0	0	104	2	18	20
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QC	0	0	0	0	8,874	246	710	956
ON	352	8	6	14	15,891	400	452	852
MB	43	0	0	0	2,511	44	110	154
SK	90	3	0	3	4,829	161	445	606
AB	176	1	0	1	9,603	248	543	791
BC	29	0	0	0	2,069	118	205	323
Canada	735	12	6	18	46,336	1,324	2,830	4,154

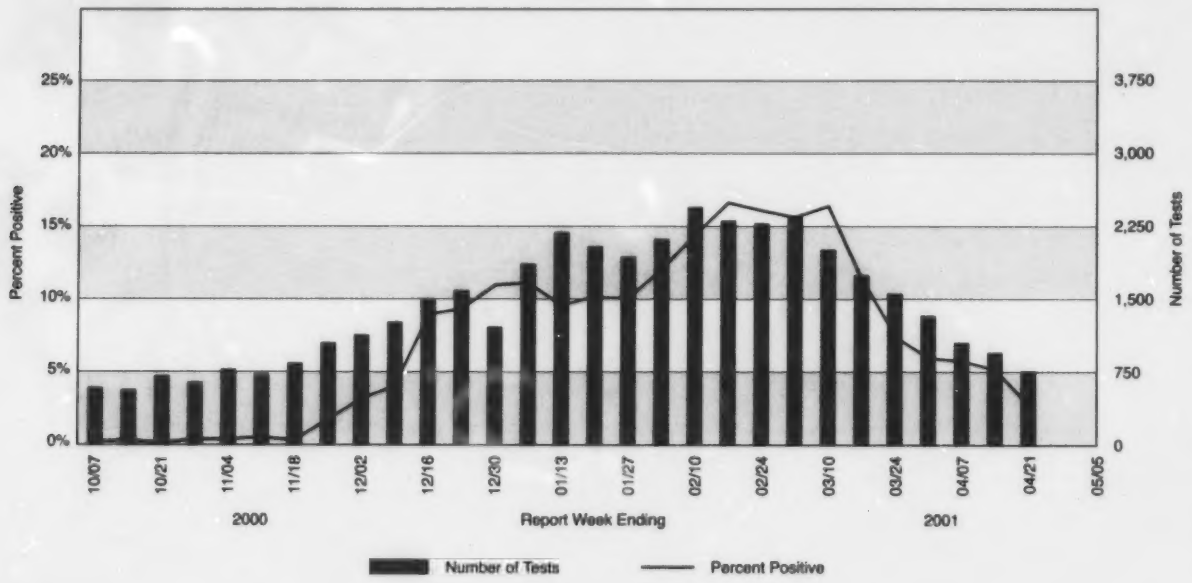
Specimens from NT, YT, and NU are sent to reference laboratories in other provinces.

Note: cumulative data includes updates to previous weeks, thus due to reporting delays, the sum of the weekly report totals do not add up to the cumulative total.

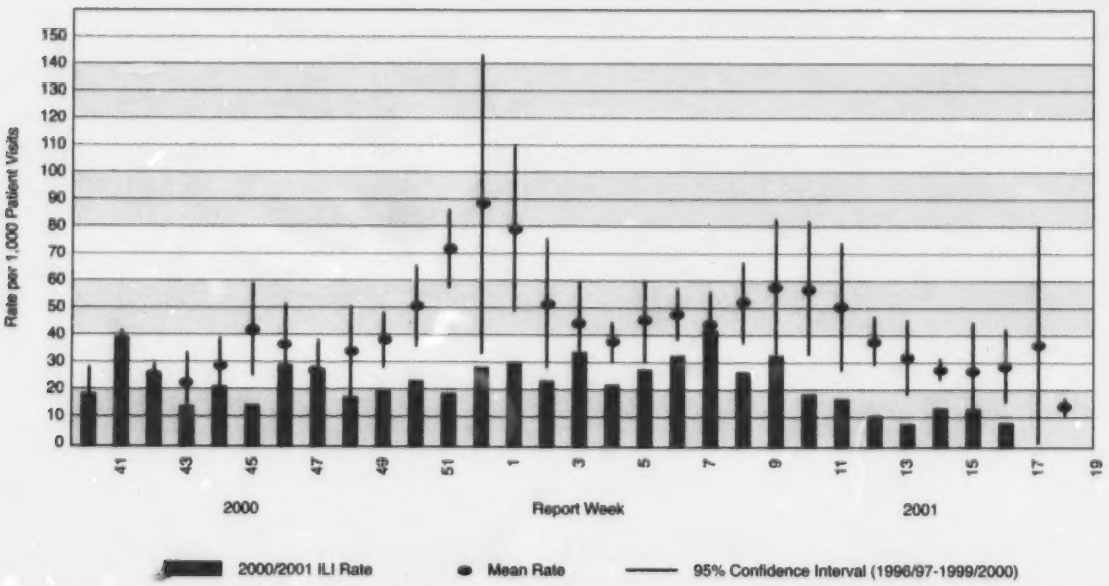
Abbreviations: Newfoundland/Labrador (NF), Prince Edward Island (PE), New Brunswick (NB), Nova Scotia (NS), Quebec (QC), Ontario (ON), Manitoba (MB), Saskatchewan (SK), Alberta (AB), British Columbia (BC), Yukon (YT), Northwest Territories (NT), Nunavut (NU)

Respiratory virus laboratory detections in Canada, by geographic region, are available weekly on the following website: <http://www.hc-sc.gc.ca/hpb/lcdc/bid/dsd/rvdi/index.html>

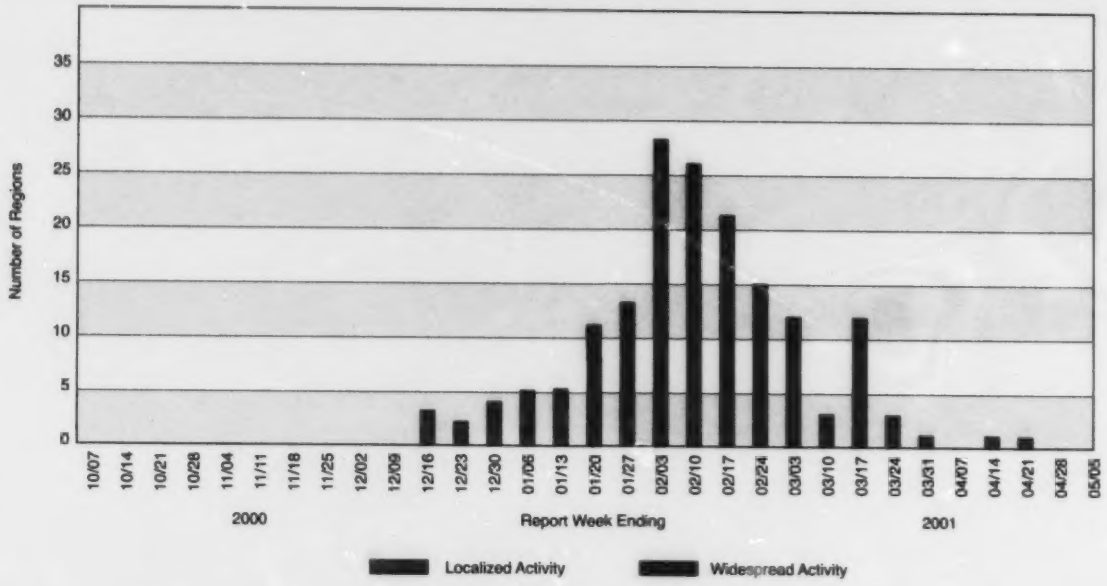
Influenza tests reported and percentage of tests positive, Canada, by report week, 2000-2001



Influenza-like illness (ILI) reporting rates, Canada, by report week, 2000-2001 compared to 1996/1997 through 1999/2000 seasons

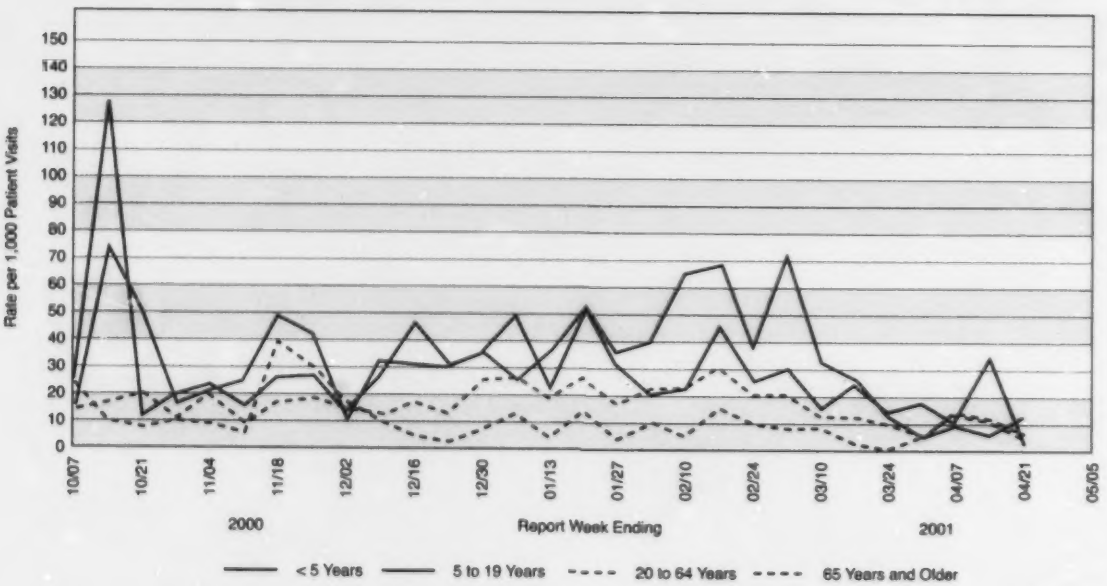


Number of influenza surveillance regions† reporting widespread or localized influenza activity, Canada, by report week, 2000-2001

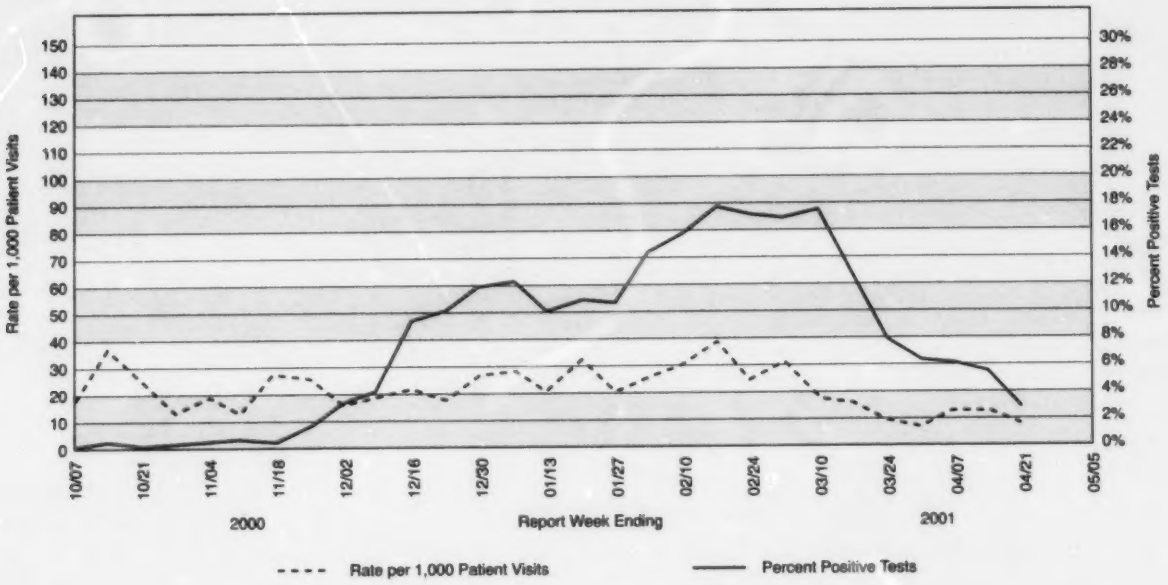


† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist.

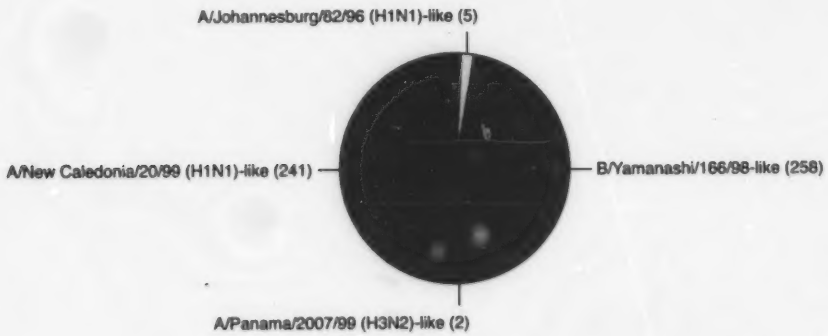
Age-specific influenza-like illness rates, Canada, by report week, 2000-2001



Influenza-like illness rates by percent positive laboratory influenza tests, by reporting week, Canada, 2000-2001



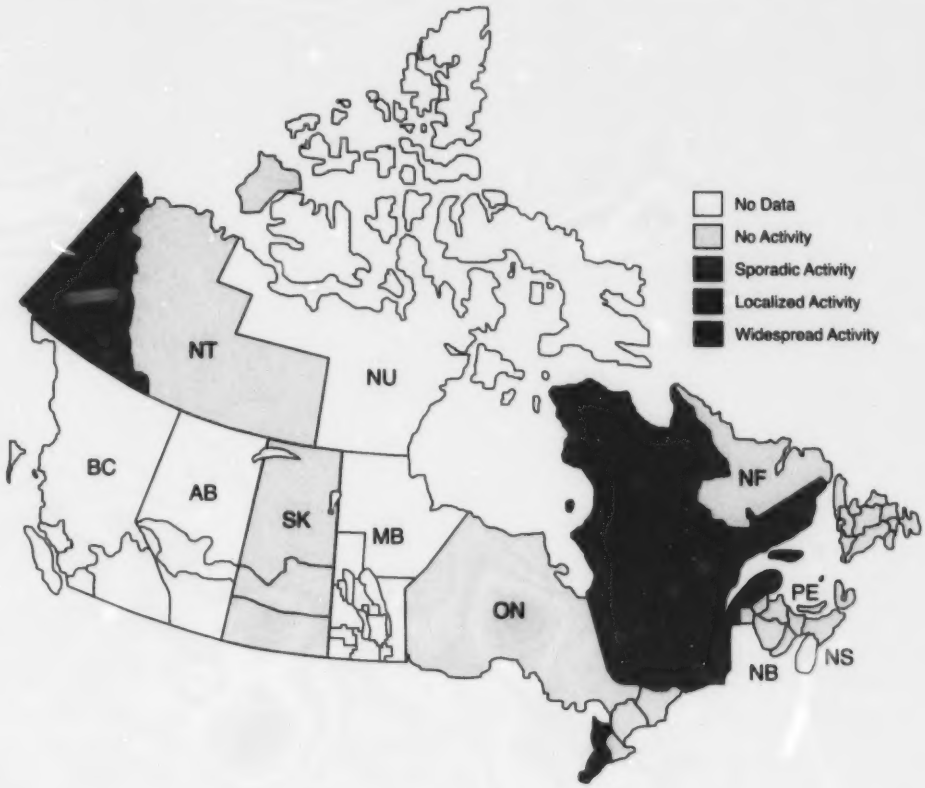
Influenza strain characterization, Canada, cumulative, 2000-2001 influenza season by the Respiratory Viruses Section at the National Microbiology Laboratory (n=506)



Components of the 2000-2001 Canadian vaccine: B/Yamanashi/166/98-like; A/Panama/2007/99 (H3N2)-like; A/New Caledonia/20/99 (H1N1)-like. A/Johannesburg/82/96-like (H1N1) viruses are antigenically distinct from the A/New Caledonia/20/99 virus which is the H1N1 component of the 2000-2001 vaccine. However, the A/New Caledonia/20/99 vaccine strain produces high titres of antibody that cross-react with A/Johannesburg/82/96-like viruses.

Please note that the above graphs may change as late returns come in.

Influenza Activity Level by Influenza Surveillance Region, Canada
April 15 to April 21, 2001 (Week 16)



Note: Influenza activity levels, as represented on this map, are assigned and reported by Provincial and Territorial Ministries of Health, based on laboratory confirmations, sentinel ILI rates (see above graphs and tables) and outbreaks. Please refer to detailed definitions on the following page. Where no data is reported, late reports from the provinces and territories appear on the FluWatch website, select single maps by report week.

<http://cythera.ic.gc.ca/dsol/fluwatch/fluwatch.phtml?lang=e>

Definitions for the 2000-2001 season

FluWatch reports include data and information from four main sources: laboratory reports of positive influenza tests in Canada; sentinel physician reporting of influenza-like illness (ILI); provincial/territorial assessment of influenza activity based on various indicators, including laboratory surveillance, ILI reporting, school and work site absenteeism, and outbreaks; WHO and other international reports of influenza activity. The map shows influenza activity in the "influenza surveillance regions" † within each jurisdiction, as determined by the provincial/territorial epidemiologists.

ILI definitions for the 2000-2001 season

ILI in the general population: Acute onset of respiratory illness withfever and cough and with one or more of the following—sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

Definitions of ILI outbreaks for the 2000-2001 season

Schools and work sites: greater than 10% absenteeism on any day most likely due to ILI

Residential institutions: two or more cases of ILI in a seven-day period.

Institutional outbreaks should be reported within 24 hours of identification.

Activity levels are defined as:

1 = No activity reported

2 = Sporadic: sporadically occurring ILI and confirmed influenza* with no outbreaks detected within the influenza surveillance region†

3 = Localized: sporadically occurring ILI and confirmed influenza* and outbreaks of ILI in less than 50% of the influenza surveillance region(s)†

4 = Widespread: sporadically occurring ILI and confirmed influenza* and outbreaks of ILI in greater than or equal to 50% of the influenza surveillance region(s)†

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* confirmation of influenza within the surveillance region at any time within the prior four weeks

† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist